DOCUMENT RESUME

ED 317 827 CE 054 684

AUTHOR Hillers, Val; Hiller, Jan
TITLE Foods of the Pacific Northwest. Project 2. Leader Guide and Member Manual.
INSTITUTION Idaho Univ., Moscow. Cooperative Extension Service.; National Four-H Club Foundation, Washington, D.C.; Oregon State Univ., Corvallis. Cooperative Extension Service.; Washington State Univ., Pullman. Cooperative Extension Service.
REPORT NO PNW334; PNW335
PUB DATE Dec 88
NOTE 79p.; Produced by the Tri-State Food/Nutrition Curriculum Committee; publication of the Pacific Northwest Cooperative Extension (PNW).
PUB TYPE Guides - Classroom Use - Guides (For Teachers) (052) -- Guides - Classroom Use - Materials (For Learner) (051)

EDRS PRICE MF01/PC04 Plus Postage.
DESCRIPTORS Consumer Science; *Cooks; Dietitians; Exercise; *Food; *Food Processing Occupations; *Food Service; Foods Instruction; Health Promotion; Heredity; Home Economics Skills; Junior High Schools; *Nutrition; Nutrition Instruction; Occupational Information
IDENTIFIERS *4 H Programs; *Pacific Northwest

ABSTRACT

These two documents are manuals for an intermediate level 4-H food and nutrition project. The leader's guide includes an introduction, 10 units, and a supplemental unit. The introduction includes a discussion of 4-H philosophy, sources of help, working with middle school boys and girls, how the guide is organized, and how to organize meetings. Tables list the staple foods, equipment, and materials needed for each lesson. Topics of the units are fruit, potatoes and onions, lentils and pork, cheese, poultry, wheat, locally produced vegetables, hunted and gathered foods, meal planning, and careers and hobbies with food. The supplemental unit is on food, exercise, and heredity. The member manual includes 10 units. The first eight units include key points, an introduction, information about the Pacific Northwest, food preparation information, recipes, meal management information, safety and storage information, nutrition and health information, consumer information, activities, ideas to explore, and checklists for the unit. The meal planning unit lists key points. The careers unit provides information about the following occupations: dietitian, food processor, food buyer, food sanitarian, and chef. The supplemental unit is not included in the member manual. (CML)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED317827

FOODS OF THE PACIFIC NORTHWEST

PROJECT 2

LEADER GUIDE

MEMBER MANUAL

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

✓ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

V Hillers

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

BEST COPY AVAILABLE

CE054684

FOODS of the PACIFIC NORTHWEST

Project 2

Leader Guide

Val Hilllers, Jan Hiller

PNW336

Foods of the Pacific Northwest

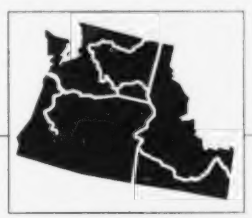
The intermediate materials for the Foods of the Pacific Northwest project are the work of the Tri-State Food/Nutrition Curriculum Committee. This committee developed the components, concepts, and objectives for an overall food and nutrition curriculum for the three states. Three projects, one each for beginning, intermediate, and advanced levels, and an enrichment guide are part of that curriculum.

A special thanks to the many leaders and Extension agents from the three cooperating states who reviewed the materials and provided helpful suggestions in the process of preparing the member manual and leader guide.

Acknowledgement and appreciation is expressed to the following committee members:

Idaho	Oregon	Washington
Lois Glenn	Cheryl Carlson	Alice Weber
Linda Hamilton	Sally Ishikawa	Esther McLatchy
Rosa Smith	Elaine Husted	Bonnie Brown
Mary Lee Wood	BarbaraW.Boltes	Jan Hiller
Marilyn Swanson	Margaret Lewis	Val Hillers

Consultant: Eleanor Wilson
Editor: Marianne Kurth
Typography: Clint Keller



Foods of the Pacific Northwest

An Intermediate Level 4-H Food and Nutrition Project

Introduction iv

Unit 1 The Pacific Northwest: A Fruit-Lover's Paradise 1

Food Preparation
- Berry Sauce
- Vanilla Pudding

Unit 2 Foods Under Our Feet: Potatoes & Onions 3

Food Preparation
- Potato Soup
- Clam Chowder

Unit 3 A Tasty Combination: Lentils and Pork 4

Food Preparation
- Polish Lentils

Unit 4 Say Cheese, Please 6

Food Preparation
- Cheese Enchiladas

Unit 5 Poultry: Food With Wings 7

Food Preparation
- Herbed Chicken Bites

Unit 6 Wheat: The World's Most Important Grain 9

Food Preparation
- Quick Wheat Bread
- Cranberry Walnut Bread
- Tabbouli

Unit 7 Locally-Produced Vegetables: Garden Crops and Farmers' Markets 11

Food Preparation
- Vegetables & Beef Stir-fry

Unit 8 Living Off the Land:Hunted and Gathered Foods ____ 13

Food Preparation
Braised Game Steaks
Pan-Fried Fish
Microwave Cooked Whole Fish
Fresh Huckleberry Pie

Unit 9 Put It All Together ____ 15

Unit 10 Working With Food: Careers and Hobbies ____ 17

Supplemental Unit: Food, Exercise, and Heredity ____ 18

Introduction

As a volunteer leader for "Foods of the Pacific Northwest - Unit 2," a 4-H Food and Nutrition project, you have an important role. You can help the middle school youth who enroll in the project learn more about the foods produced in the Pacific Northwest including the cultural influences, where the food is produced, and selected ways to prepare and store the food safely.

This guide will help you plan and conduct at least ten activity-filled meetings for the 4-Her's in your group. Each unit contains a list of foods needed, key points, and a suggested organizational plan for the meeting including a time schedule.

Foods of the Pacific Northwest - Unit 2 is the second project in this series. You may want to use Foods of the Pacific Northwest - Unit 1 as a reference.

4-H Philosophy

4-H is based on the philosophy of learning by doing. 4-H members learn life skills such as decision-making, responsibility, self-evaluation, and leadership. This project offers many opportunities for youth to learn important life skills.

Getting Help

You are responsible for providing educational experiences for youth enrolled in your project group. However, there are many other people who can assist. Parents of club members are generally expected to provide transportation, a meeting place, or help pay for ingredients used in recipes. Parents or friends may come to a meeting to demonstrate a specific skill.

Teen members may like to coach younger members while they are learning a new skill, assist them in preparing demonstrations, or suggest some fun activities.

There may be other resources in your community, such as restaurants, fast-food establishments, bakeries, catering services, meat shops, that would welcome you and your group. You could learn about food service careers, business practices, and food safety concerns from these tours.

Working with Middle School Boys and Girls

In general, youth ages 12 to 15 experience enormous and rapid physical change. Puberty begins sometime between ages 10 and 15. Even though your 4-H'ers may be the same chronological age, they will probably look and act very different from one another.

Adolescents are very concerned about their weight and appearance. This project contains a supplemental unit on body image and weight control titled "Food, Exercise, and Heredity" that can be used at any time. Perhaps you will want to schedule a special meeting to cover the topic.

At this age, youth want and need relationships with adults. They need to feel accepted by some adults, perhaps because this is a period when they need to express their independence from their parents. You can be an adult friend. The time you spend with teens will be valued.

Adolescents sometimes want to be treated as adults. Socially and emotionally most adolescents still have a lot of growing up to do. A need for peer acceptance is strong. Acknowledging that every teen has something to contribute to the group will help them all learn a valuable lesson.

You can help by being supportive of any positive adult behavior you see. Make a special effort to share the leadership of and responsibility for the group with every member.

Girl/Boy Differences

In general, boys enter puberty later than girls. Boys who haven't started puberty are still shorter and smaller than their peers. This situation may make boys feel less than positive about their body images. Boys usually do not develop fine muscle coordination as soon as girls, so they may be more awkward in handling kitchen equipment. Some youth this age may function better in a same-sex group, especially when learning new skills. Boys may want to relate socially to girls but may feel intimidated. Some mixed-sex social contact is usually appropriate for this age.

You can help members have positive learning experiences. Many of the activities in this project will help 4-H members gain a sense of accomplishment and foster a positive self-image.

How This Leader Guide is Organized

The Member Manual is organized into ten units. The Leader Guide contains supporting materials for the units, plus a supplemental unit. Each unit provides a brief overview of that particular unit, followed by a detailed plan for organizing the meeting. Activities are suggested for your meetings, but you may use your own creative ideas. Add or substitute activities appropriate for your group. Plan the number of meetings that best meets the needs of group members.

The time required to do all activities in the units is between 1 1/2 and 2 hours. If you have less time available, you can either leave out some of the activities or have two meetings to cover the activities suggested in the unit.

Some units have several recipes. You can choose which of these recipes you would like to prepare or substitute similar recipes.

The skill level of your 4-H members will affect the amount of time needed for the food preparation section. If the 4-H'ers in your club are inexperienced cooks, you may need to allow a little more time for some of the food preparation steps.

Foods needed for each unit are divided into staple foods (which you are likely to have in your kitchen) and non-staple foods. Table 1 lists staple foods needed for each unit. Non-staple foods needed are listed in each unit. Equipment and materials needed for each unit are listed in Table 2.

Herbs, spices, and other seasonings make food interesting and flavorful. Herbs and spices are particularly useful to season low-salt foods. The seasonings used in the recipes in this project are: dry mustard, Worcestershire sauce, thyme, basil, ginger (ground or fresh), and prepared mustard. An optional ingredient in several recipes is ground cumin. If you do not use the cumin, the dishes will be less flavorful.

How to Organize Your Meetings

Information on planning and organizing meetings—such as where to hold the meetings, how to prepare for each lesson, how to emphasize skills, and how to make sure you have all the equipment and supplies you need—is included in the Leader Guide for Unit 1. If you are a new volunteer leader or if you have some specific questions, contact your county Extension agent for a copy of the guide.

Because the makeup of each club is different and the skill levels of members vary, you must carefully plan and evaluate activities for club members. Evaluate activities to consider what went well and what you might change in the future.

Make evaluation a learning experience for the youth by including them in discussion with you, a teen leader, another member, or a parent. If your group is small, a discussion can involve the whole group. Refer to the sections "Check Your Product" and "Check What You Learned" for each unit in the Member Manual for ideas.

You may also want to evaluate the entire meeting. Consider the following questions:

- Were the key points of the meeting clear?
- Did I give each member a chance to participate?
- Did I recognize and/or encourage each member?
- Did I consider differences in abilities and interests of youth?
- Did I consider age-level differences?
- Did I involve the parents?
- Did I give members a chance to take responsibility when it was appropriate?
- And, most important of all, did I enjoy working with the young people?

We hope that your experience as a 4-H leader for the intermediate level Foods of the Pacific Northwest will be a good one for you and that you will want to lead a 4-H food/nutrition project again next year. A senior level Foods of the Pacific Northwest project is available should you wish to continue working on this particular area of foods.

Table 1

STAPLE FOODS USED FOR EACH LESSON

	1	2	3	4	5	6	7	8
all-purpose flour		x				x		x
baking powder						x		
baking soda						x		
brown sugar						x		
butter or margarine	x	x			x			
cornmeal								x
cornstarch	x			x			x	x
eggs	x					x		
garlic				x			x	
milk	x	x				x		
oil						x	x	x
onion			x					
pepper		x	x		x			x
salt	x	x	x			x		x
shortening						x		x
sugar	x					x		x
vanilla	x							

For Units 9 and10 the staple foods will vary with the activities selected. Determine the activities you will use with your group.

Table 2

EQUIPMENT AND MATERIALS NEEDED FOR EACH LESSON

	1	2	3	4	5	6	7	8
baking dish, 9" × 13"				x	x			
bread loaf pan						x		
cake pan, 9" square				x				x
covered casserole dish			x					
cutting boards				x		x		
measuring spoons and cups	x	x	x					
meat hammer								x
mixing bowl	x			x	x	x	x	
mixing/stirring spoon	x	x				x		
pie pan								x
rolling pin								x
saucepan	x	x	x	x		x		x
sharp knives				x	x	x		
sieve	x						x	
skillet, large							x	x
wire whip	x							
newsprint	x	x						
colored pens	x							

For Units 9 and10, the equipment and materials will vary with the activities selected.

UNIT 1
THE PACIFIC NORTHWEST: A FRUIT-LOVER'S PARADISE

FOODS TO BE PREPARED

Berry Sauce, Vanilla Pudding

TIME NEEDED

One hour, 35 minutes for basic lesson; 2 hours if food experiment is done. (Allow more time for beginning cooks.)

FOODS NEEDED(other than staples)

One package (10 oz.) frozen, sweetened raspberries or strawberries or 1 1/2 cups fresh berries. For optional food experiment: 1/2 cup fresh strawberries or 1/2 cup fresh, ripe peaches.

OVERVIEW

This unit introduces the idea that many types of foods are grown in the Pacific Northwest. Encourage group members to take more notice of locally grown foods when they are in the supermarket and as they travel in the region. The foods to be prepared in this Unit are low-fat and quite low in sugar, in accordance with the Dietary Guidelines.

KEY POINTS

Introduction

A wide variety of fruits is grown in the Pacific Northwest. The local climate determines which fruits are suitable for a locality. Locally grown fruits purchased in season are the highest quality available.

Food Preparation

Cornstarch-thickened sauces and puddings need to be stirred during cooking. To prevent eggs from curdling, stir some of hot pudding into the beaten egg. Puddings and sauces cooked in a microwave oven need less stirring.

Planning Meals

The Dietary Guidelines focus on modifications to the American diet which will reduce the risk of chronic diseases such as heart disease and cancer. Food Group Plans are designed to help people select foods which supply a wide variety of nutrients. Plan meals which follow the Dietary Guidelines, include foods from all food groups, and choose foods which provide a variety of textures and colors.

Throughout this project, recipes have been chosen to teach cooking principles and to promote eating in a healthy way. For each recipe included in the project manual, there are many other recipes which can be substituted which will teach the same Units. Encourage 4-H'ers to look for recipes which follow the Dietary Guidelines.

Safety and Storage

Bacteria, molds, and yeasts will grow rapidly in foods which are warm, moist, and low in acid. Puddings need to be refrigerated and used in a few days. Puddings left at room temperature spoil rapidly because the conditions are ideal for bacterial growth.

Be a Wise Consumer

Locally grown fruits usually taste better if they are picked when ripe.

Food Activity

Sugar causes water to be drawn out of fruits.

IDEAS FOR ORGANIZING THE MEETING

A. Introduction to the Unit (15 minutes)

This meeting will set the stage for the entire project. Introduce yourself and have the 4-H'ers

introduce themselves. Give an overview of the Foods of the Pacific Northwest Project. Then get the 4-H'ers involved and thinking about foods grown in the region.

Prepare two large sheets of paper or newsprint. Across the top of one sheet, write "Fruits grown in the Pacific Northwest." Across the top of the other sheet, write "Fruits which do not grow in the Pacific Northwest." Encourage the youth to think about all the fruits they eat. Let them decide which fruits are grown in this region and which come from other regions or countries.

Give each 4-H'er a colored pen or crayon. As the 4-H'ers are writing the names of fruits on the two sheets, ask them which of the fruits are grown in your area. If there are any local commercial fruit farms, you could mention the farm name and the fruits they sell. Talk about the superior quality of locally-grown fruits harvested in season.

Fruits Grown in the Pacific Northwest:

Apples
Apricots
Cherries, sweet and tart
Grapes
Nectarines
Peaches
Pears
Plums
Prunes
Blackberries
Blueberries
Cranberries
Raspberries
Strawberries
Cantaloupe
Watermelon

B. Optional Food Experiment (15 minutes)

Start the "Experiment on Water Changes in Fruit." You may want to set a timer as a reminder to look at liquid loss after 30 minutes and 1 hour.

C. Food Preparation (30 minutes)

Divide the group in half. Have one team make Berry Sauce while the other team prepares Vanilla Pudding. Put food in the refrigerator to cool. (A teen leader or a co-leader would be very useful to help teach members the food preparation skills.)

Optional: Check "Experiment on Water Changes in Fruit." (5 minutes) Observe changes, discuss why the changes occurred.

D. Fitting in Fitness (10 minutes)

Two keys to good health are diet and exercise. Encourage your 4-H'ers to develop an exercise program of sports, walking, swimming, or running. Include a short fitness activity in each meeting. Take a brisk 5-10 minute walk or do the exercises described in this Guide. Excercise illustrations are at the end of this Guide.

Chair Twist: (for flexibility) Sitting in a chair, cross your left leg over your right leg, put your right elbow on your left knee, twist and look over your left shoulder as far as you comfortably can. Hold 1 minute, then reverse directions and turn to look over your right shoulder. Hold 1 minute. The chair twist increases flexibility of the spine and torso.

E. Eat/Evaluate/Discuss (20 minutes)

Eat the berry sauce and pudding. Evaluate the foods by discussing the questions in "Check Your Product" in the Member Manual.

Discuss "Meal Planning and Food Safety." Highlight use of the Dietary Guidelines in meal planning. If you have extra time, ask 4-H'ers to plan several menus which include fruit sauce over pudding. Remind youth that puddings spoil rapidly and must be kept refrigerated. Try involving the youth in a discussion rather than lecturing them on these topics. Ask the questions in the "Check What You Learned" section of the Member Manual to see if the 4-H'ers understand the key points of the Unit.

F. Clean Up (10 minutes)

Be sure everyone participates in washing dishes and cleaning up the kitchen. Dishwashing may seem like a routine task, but it is important to prevent spread of disease from one person to another. Dishes washed by hand should be washed in hot, soapy water, rinsed in hot water, and allowed to air dry. If using a dishwasher, teach the 4-H members to load it correctly.

G. Closing and Planning Ahead (10 minutes)

Point out the "Ideas to Explore" section which the 4-H'ers may wish to do at home. These ideas may be developed into exhibits and demonstrations.

Encourage 4-H members to plan and prepare a meal for their family which includes a pudding. Have them report their experience next week.

Make plans for the next meeting. The 4-H'ers will learn more from this unit if they read the material in the Member Manual before the meeting. You may want to request that the 4-H members read Unit 2 so they will be prepared to discuss the information at the next meeting.

UNIT 2
FOOD UNDER OUR FEET: POTATOES & ONIONS

FOODS TO BE PREPARED

Potato Soup or Clam Chowder

TIME NEEDED

One hour, 35 minutes

FOODS NEEDED (other than staples)

One-half pound potatoes, 1 onion, 1 stalk celery.

Optional ingredients: 1 can clams, red wine or cider vinegar.

OVERVIEW:

This unit will help 4-H members learn about root crops grown in the region and ways to use potatoes and onions in meals.

KEY POINTS

Introduction

Potatoes and onions are widely grown in dry, inland areas of the Pacific Northwest.

Food Preparation

White sauce is made by adding flour to melted fat, then mixing in the liquid.

Planning Meals

Soup is versatile and preparation and serving can be adapted to fit the situation.

Correct storage conditions for potatoes and onions increase their shelf life.

Foods flavored with onion and garlic need less salt.

Low-fat dairy products can be substituted for higher fat dairy products.

IDEAS FOR ORGANIZING THE MEETING

A. Fitting in Fitness (10 minutes)

The 4-H'ers may arrive at the meeting tired after a long day at school. A short exercise session will help them unwind. Begin with a repeat of the Chair Twist from Unit 1 for flexibility. Then do an exercise for muscular endurance, the Overhead Press.

Overhead Press (for muscular strength): Sitting in a chair, hold a book, a can of food, or other weighted object in each hand. Starting with elbows bent and hands at shoulder level, extend your arms over head. Repeat ten times.

B. Introduction to Unit 2 (15 minutes)

Begin the discussion by asking the 4-H members about the information in the Member Manual on growing potatoes and onions. Ask questions such as the following:

"Where were potatoes first produced?"
"Who brought potatoes to North America?"
"Where are potatoes and onions grown in the Pacific Northwest?"

Ask the 4-H'ers which root crops they have seen growing in gardens or fields. List their answers on a newsprint sheet. Foods they might list include: potatoes, onions, radishes, carrots, turnips, parsnips, rutabagas, beets, and garlic.

C. Food Preparation (30-40 minutes)

Divide the group in half. A teen leader, another adult leader, or a parent could assist each group. One team can prepare the vegetables for the chowder; the other team can make the white sauce.

D. Eat/Evaluate/Discuss (20 minutes)

Eat the clam chowder. Evaluate it using the criteria in the Member Manual.

Demonstrate and discuss ways to chop vegetables safely. Ask whether the 4-H'ers prefer to chop with a knife, blender, or food processor. Encourage members to try a new method.

Talk about cutting down on the amount of salt in foods by using other seasonings such as onion, garlic, lemon, and herbs.

Discuss the value of potatoes as a low-calorie source of nutrients.

F. Clean Up (10 minutes)

As the youth are cleaning up, tell them that one of the reasons to clean food spills from countertops is that food spills attract insects.

G. Closing/Future Plans (10 minutes)

During the meeting in which Unit 3 is covered, use the extra time while a casserole is cooking for sharing ideas. 4-H members may make short demonstrations, either individually or as part of a team.

If you would like to use the time for sharing, ask the 4-H'ers to investigate one of the "Ideas to Share" or "Food Experiments" in Units 1, 2, or 3 and share what they find with the group. Write down the topic each person or team chooses. The youth may need a reminder that they are to prepare a short presentation for the next meeting.

There will be 25 minutes for sharing during Unit 3. Divide the time up among the presenters and set a time limit for each presentation.

UNIT 3
A TASTY COMBINATION: LENTILS AND PORK

FOOD TO BE PREPARED

Polish Lentils

TIME NEEDED

One hour, 35 minutes

FOODS NEEDED (other than staples)

One cup lentils, 2 cups tomatoes (canned or fresh), 1 green pepper, dry mustard, Worcestershire sauce, thyme. Optional ingredient: 1 pound Polish sausage or other cured link sausage. Note: Other seasonings can be substituted for dry mustard, Worcestershire sauce, and thyme.

OVERVIEW

When the 4-H members complete this unit, they will have learned to cook lentils and pork and to use them in meals.

KEY POINTS

Introduction

The Pacific Northwest produces almost all of the lentils and dry peas grown in the United States. Legumes such as lentils and beans contain more protein than other plants. Some pork is also produced in the region.

Food Preparation

Lentils and split peas do not need to be soaked before cooking. Lentils and other legumes are cooked before they are used in casseroles.

Meal Planning

Casseroles require little preparation time, but a long cooking time. Serve crunchy, colorful foods with a lentil casserole.

Meats are cured by adding a nitrite salt. The nitrite salt is responsible for the flavor and color of cured meats. Nitrites also help prevent growth of bacteria.

Cook fresh pork to 160°F. or until no pink areas remain in any part of the meat.

Nutrition and Health

Legumes are high-protein, low-fat foods.

Polish Lentils has a high nutrient density which means that it is low in calories, but supplies many nutrients.

Trim visible fat from pork and other meats.

IDEAS FOR ORGANIZING THE MEETING

A. Food Preparation (20 minutes)

Begin cooking the lentils. Chop the onion and green pepper. Slice the Polish sausage. Add additional ingredients to cooked lentils. Put casserole in oven to bake.

B. Introduction to Unit 3 (10 minutes)

Pin a map of the Pacific Northwest on the wall. A line drawn from Spokane, Washington, to Walla Walla, Washington, and from Walla Walla, Washington, to Grangeville, Idaho, then back to Spokane includes the area which grows almost all of the lentils and dry peas in the United States.

Discuss the key points of the Unit. Use the questions in the "Check What You Learned" section of the Member Manual as discussion starters. This is a much more effective teaching method than if you just read off the key points.

C. Fitting in Fitness (10 minutes)

Bent Leg (for flexibility): Sitting in a chair, with both hands under one knee, pull the knee as close to your chest as you comfortably can. Hold for one minute; switch legs. Now do both legs together.

Overhead Press (for muscular strength): Directions in Unit 2.

Ask group members what kind of physical activity they participate in regularly. Encourage them to develop a fitness plan. Leaders are role models for their 4-H groups. If you have a fitness plan, share what you do with the group. Perhaps the group would like to investigate the fitness classes and establishments in your community.

D. Presentations or Meal Preparation (25 minutes/choose one)

1) Use the rest of the time while the casserole is cooking for the youth to make brief presentations on the topics they chose last meeting. These presentations will help the 4-H'ers learn to organize their thoughts and make reports. Be sure to keep each individual or team presentation within the allotted time so that all have an opportunity to present their information.

2) Prepare accompanying items to serve with Polish Lentils. (See suggested menu in Member Manual.) Eat a simple meal together.

E. Eat/Evaluate (10 minutes)

Eat the Polish Lentils. Evaluate by the criteria in the Member Manual. Discuss what members would serve if they prepared Polish Lentils for their family.

F. Planning Ahead (10 minutes)

The youth are now one-third of the way finished with this unit. Ask them what they have enjoyed most so far and what they want to cover in the rest of the unit.

Ask for a volunteer(s) to plan a ten-minute exercise session for the next meeting. Possibilities include jumping rope, dance, yoga, stretching, and aerobic exercises.

G. Clean Up (10 minutes)

UNIT 4
SAY CHEESE, PLEASE

FOOD TO BE PREPARED

Cheese Enchiladas

TIME NEEDED

One hour, 30 minutes

FOODS NEEDED (other than staples)

One quart tomato juice, chili powder, 1/2 pound Monterey Jack or Cheddar cheese, 8 green onions, 1 can green chilies, 1 dozen 8" flour tortillas. Optional ingredient: ground cumin.

OVERVIEW

In this Unit, 4-H'ers will learn about cheese production in the Pacific Northwest and about cooking with cheese, storage of cheese, and the nutritional value of cheese.

KEY POINTS

Introduction

About one-third of the milk produced in the Pacific Northwest is manufactured into cheese. Although there are many varieties of cheese, all are formed by action of an enzyme and acid on milk.

Food Preparation

A well-seasoned sauce is essential for good tasting enchiladas. Cheese should be cooked quickly at a low temperature to prevent development of a tough, stringy texture.

Meal Management

Balance spicy and mild foods in a meal.

Safety and Storage

Proper packaging of cheese helps retain moisture and retards mold growth. Hard cheese will keep for several weeks when refrigerated. Cottage cheese should be used within a few days after purchase.

Remove moldy portion of hard cheeses by cutting away half an inch of cheese below the mold.

Nutrition and Health

People who do not use dairy products usually have low intakes of calcium and riboflavin.

Be a Wise Consumer

Cheese labeling indicates how the cheese was made. Processed cheeses melt easily to blend with other ingredients.

IDEAS FOR ORGANIZING THE MEETING

A. Introduction to Unit 4 (10 minutes)

Have the members take turns reading the key points listed at the beginning of Unit 4. Ask them to be prepared to discuss what they have learned about these key points at the end of the meeting.

B. Food Preparation (30 minutes)

1. Divide into two teams. Team A will prepare the sauce, and Team B will prepare the filling and heat the tortillas.
2. When sauce, filling, and tortillas are ready, assemble enchiladas. Let each 4-H'er practice wrapping one or two. If the group is large, set up two areas for assembling enchiladas to speed up the process.
3. Put enchiladas in oven to bake for 20 minutes.

C. Fitting in Fitness (10 minutes)

The 4-H'er(s) who volunteered to prepare the exercise session should lead this segment. If the 4-H'er(s) forgot to prepare the "Fitting in Fitness" segment, repeat some of the exercises which were done in the first three Units.

D. Prepare to Eat Enchiladas (10 minutes)

Clean up the preparation dishes and countertops. Set the table. The 4-H'ers may need some help in setting the table correctly. Knives are placed to the right of the plate, cutting edge toward the plate. Spoons are placed next to the knives with bowls up. Forks are placed tines up, to the left of the plate. The napkins are placed to the left of the forks. The water glasses are placed at the tip of the dinner knives.

Each time the 4-H'ers sit down to eat a food they have prepared, have them set the table correctly until they can do so easily. Encourage them to experiment with different types of table settings and a variety of ways of serving meals.

E. Eat/Evaluate/Discuss (15 minutes)

Eat the Cheese Enchiladas. Evaluate by the criteria in the Member Manual. Encourage table conversation to help the youth increase their social skills.

F. Closing/Future Plans (5 minutes)

Encourage the youth to prepare a meal for their family which includes cheese enchiladas or some other cheese dish. Ask them to share information about their meal and the response of their family at the next meeting.

Ask a volunteer to plan a ten minute exercise session for the next meeting.

Have the 4-H'ers summarize the key points of the Unit by asking them the evaluation questions at the end of the unit in the Member Manual.

G. Clean Up (10 minutes)

UNIT 5
POULTRY: FOOD WITH WINGS

FOOD TO BE PREPARED

Herbed Chicken Bites

TIME NEEDED

One hour, 45 minutes (1 hour, 55 minutes if food experiment is done)

FOODS NEEDED (other than staples)

One chicken breast, 2 chicken thighs, 1/4 pound saltine crackers, 1/4 cup Parmesan cheese, thyme, basil. Optional food experiment: 2 chicken legs.

OVERVIEW

The 4-H'ers will learn to prepare and store poultry and to use food handling guidelines when cooking with poultry. In addition, the Unit will help group members understand that a nutritious diet, regular exercise, and adequate sleep are essential parts of a healthy lifestyle.

KEY POINTS

Introduction

Most poultry sold in the United States comes from the southern states. Chicken produced in the Pacific Northwest may cost more than chicken from southern states because it costs more to raise chickens in a cooler climate.

Food Preparation/Food Handling

Chicken breasts and thighs are the only pieces which are meaty enough to cut into bite-size pieces.

A sharp knife and a cutting board are used to debone poultry. All equipment used to cut up poultry should be washed, sanitized with a bleach solution (two teaspoons chlorine bleach to four cups of lukewarm water), and then rinsed. If you feel that the 4-H members in your group cannot successfully bone the chicken, use whole fryer wings, thighs, or drumsticks and roll in the seasoned crackers. Bake at 375° F until browned, about 45-55 minutes, turning once.

Poultry is cooked until well done - until the juices run clear when the flesh is pricked with a fork, or to 180° F on a meat thermometer.

Nutrition and Health

A nutritious diet, regular exercise, and adequate sleep are needed for a healthy lifestyle.

High fat dishes have a low nutrient density. To reduce fat in meals, use low fat meats which are roasted, broiled, or boiled.

Be a Wise Consumer

Whole chicken is frequently a better buy per pound of meat than chicken pieces. When using a recipe which uses only some parts of the chicken, an additional meal should be planned to make use of the remaining chicken pieces.

IDEAS FOR ORGANIZING THE MEETING

A. Fitting in Fitness (10 minutes)

The 4-H'er(s) who volunteered to prepare the exercise session should lead this segment. If you prefer to lead the fitness segment, teach the youth to do leg hops, an activity to measure endurance.

Leg Hops: Stand with left leg back and right leg forward and slightly bent. Clasp hands behind the neck. Jump up and change leg positions (right leg back and left forward), keeping forward leg slightly bent. Continue jumping and changing leg positions for as long as possible, up to 60 seconds. Count the number of times the right leg comes forward.

Excellent endurance - 60 hops
Good endurance - 50 hops
Fair endurance - 40 hops
Poor endurance - 30 hops or less

Endurance is the body's ability to work for a long time. Activities that build endurance are swimming, running, cross-country skiing, bicycling, soccer, ice hockey, racquetball, and tennis.

B. Introduction to Unit 5 (10 minutes)

Very briefly, discuss climatic factors that make poultry production more costly in the Pacific Northwest than in southern states. Talk about each of the food handling guidelines listed under "Safety/Storage" and tell the 4-H'ers to be sure to follow these guidelines whenever they cook poultry or meats.

C. Food Experiment (optional, 5 minutes)

Prepare the chicken for the food experiment and put it in oven.

D. Food Preparation (30 minutes)

1. Show how to bone and cut chicken, then let each of the 4-H'ers practice. (You may want to borrow extra cutting boards and sharp knives.)
2. Crumb crackers with a rolling pin or a blender, add cheese and seasoning.
3. Melt butter or margarine.
4. Dip chicken in fat, roll in crumbs, put on baking dish.
5. Bake 20 minutes.

E. Clean Up Food Preparation Dishes and Countertops (10 minutes)

Review food handling guidelines for poultry and meats while the 4-H'ers are cleaning up.

F. Prepare to Eat (10 minutes)

Set the table. Discuss other foods which could be served with Herbed Chicken Bites.

G. Eat/Evaluate/Discuss (15 minutes)

Eat the Herbed Chicken Bites. Evaluate them by the criteria listed in the Member Manual.

Ask group members about measures they are taking to develop or maintain a healthy lifestyle. Are they choosing nutritious foods? Do they exercise regularly? Do they have regular sleep patterns?

If the food experiment has been part of this meeting, evaluate the results of the different cooking techniques.

H. Clean Up (10 minutes)

I. Closing and Planning Ahead (10 minutes)

Ask the 4-H'ers the evaluation questions at the end of the lesson in the Member Manual. If they can answer these questions, they have learned many of the important points of the lesson.

Instruct 4-H'ers to keep track of their exercise patterns for 3-5 days on the exercise record in their manual.

Ask for a volunteer to prepare a ten minute exercise session for the next meeting.

If possible, make plans for a field trip to investigate one or several of the topics listed under Ideas to Explore. If you go to the supermarket, you may want to look at all the foods you have studied in the first five units.

UNIT 6

WHEAT: THE WORLD'S MOST IMPORTANT GRAIN

FOODS TO BE PREPARED

Quick Wheat Bread, Cranberry-Walnut Bread, Tabbouli

TIME NEEDED

One and one-half to two hours

FOODS NEEDED (other than staples)

Quick Wheat Bread: whole wheat flour, yeast, honey.
Cranberry-Walnut Bread: orange juice, cranberries, walnuts.
Tabbouli: bulgur, tomatoes, green onions, parsley, fresh mint or dry mint flakes (optional), lemon juice, cumin (optional).

OVERVIEW

In this lesson the 4-H'ers will learn to use wheat in breads and as a main dish. They will also learn about regional production of wheat and the role of wheat foods in a healthy diet.

KEY POINTS

Introduction

Wheat is a staple food in many countries. The Pacific Northwest specializes in production of wheat which is used for steamed cakes, Asian noodles, and flat breads.

Preparation

Quick breads are lightly stirred so a minimum of gluten is formed. Yeast breads are kneaded until the dough is smooth and elastic to develop sufficient gluten for the bread to rise properly.

Wheat flour is essential for high-quality yeast breads. Yeast bread dough is doubled in size when the imprint remains from a finger pressed lightly into the dough.

Yeast breads are tested for doneness by tapping the top and listening for a hollow sound. Quick breads are tested for doneness by inserting a pick into the center of the loaf.

Bulgur is precooked, so it can be quickly prepared to eat. Tabbouli is a bulgur dish which is popular in Middle Eastern countries.

Safety and Storage

Whole wheat flour should be refrigerated if stored more than one month. White flour is stable at room temperature for a year.

Nutrition and Health

Breads made with whole wheat contain more fiber and more of some minerals and vitamins than breads made with white flour.

Sugar and fat are frequently high in desserts, but many recipes can be modified to reduce their sugar and fat content.

There are types of physical activity, such as walking, which are suitable for almost all people.

IDEAS FOR ORGANIZING THE MEETING

A. Introduction to Unit 6 (5 minutes)

Ask the 4-H'ers to list their ten favorite foods made with wheat. If only desserts are listed, remind the youth that breads are a major food for people around the world.

B. Food Preparation

Decide whether your group will make the yeast bread or quick bread. If the group will be making tabbouli (pronounced *ta **boo'** li*), mix the bulgur and boiling water about one hour before the meeting. Have the 4-H'ers compare unsoaked and soaked bulgur.

1. Prepare Bread (25-40 minutes)
   After bread is mixed: If making yeast bread, allow to rise for 30-40 minutes. If making quick bread, put in oven to bake for 50-60 minutes.
2. Prepare Tabbouli (15 minutes)
   Put in refrigerator to chill. (The Tabbouli should be prepared during the first 15-minute rising of the Honey Wheat Bread or during the baking period of quick bread.)
3. Clean Up Food Preparation Dishes and Countertops (5 minutes)

C. Bake Yeast Bread (20-30 minutes)

While the bread is baking, do "Fitting in Fitness" and discuss the "Exercise Record."

D. Fitting in Fitness (10 minutes)

The 4-H'er(s) who volunteered to prepare the exercise session should lead this segment.

E. Discussion on Exercise and Energy (10-20 minutes)

Activity level, age, size, and rate of growth affect the amount of food energy (calories) needed by each of the members of your club. Energy needs will vary greatly because of differences in all of these factors. In this discussion, focus on the effect of activity on energy used. The information in the Supplemental Unit on Food, Exercise, and Heredity will be helpful to prepare for this discussion.

Key points to highlight:

- Every action takes energy.
- Energy in the body is measured in calories or kilocalories.
- The amount of energy required depends on the number of muscles used for the activity whether large or small muscles are used and how fast, how hard, and how long the muscles are used
- The more muscles are used, the more energy is used.
- Large muscles require more energy than small muscles.
- The faster and more vigorously muscles are used, the more energy is used.
- The longer muscles are used, the more energy is used.
- Energy used in physical activity is replaced by energy from food.

Have the 4-H'ers look over their "Exercise Record." Ask them to think about the number and size of muscles used in several activities listed on their "Exercise Record." Encourage them to make a plan for building more activity into their daily schedule.

F. Eat/Evaluate/Closing (10 minutes)

Eat the foods you prepared. Evaluate them by the criteria listed in the Member Manual. Briefly summarize the major points of the lesson.

Ask for a volunteer to prepare a ten minute exercise session for the next meeting.

G. Clean Up (5 minutes)

You may want to use disposable plates and spoons for the foods so that clean-up time will be brief.

SUPPLEMENTAL INFORMATION FOR UNIT 6

Some supermarkets stock bulgur near the rice and dry beans, while others stock it with oatmeal and other cooked cereals. You may also find bulgur in bulk food bins. One brand name of bulgur sold in the Northwest is Ala. If you cannot buy bulgur in your area, you can make it.

Bulgur

1 cup whole wheat kernels
2 cups water

Clean wheat and place in large saucepan. Add water. Bring to a boil. Reduce heat, cover, and let boil for 30-60 minutes until wheat is tender.* Drain off water. Spread wheat on cookie sheet or dehydrator trays. Dry in 200 degree oven or dehydrator until wheat is dry. Crack the baked kernels in a food mill or grinder and store in refrigerator.

*Boiling time depends on the variety of wheat. Be sure to boil until wheat is tender.

If the 4-H'ers want to do a Middle Eastern meal, here's a recipe for a pocket bread filling:

Spiced Meat Filling

Makes 1 1/2 cups filling, enough for 10-12 pocket bread sandwiches.

1/2 pound ground beef, pork, or lamb
1 medium onion, chopped
1 clove garlic, minced
1/2 cup tomato sauce (1/2 of an 8-ounce can)
2 tablespoons parsley, snipped
2 tablespoons grated Parmesan cheese
1/4 teaspoon salt
1/4 teaspoon cinnamon
1/8 teaspoon pepper
1/8 teaspoon ground ginger

Cook ground meat, onion, and garlic in skillet until meat is brown and onion is tender. Drain off excess fat. Stir in tomato sauce and seasonings. Heat through. To serve, spoon filling into pocket bread. Sliced tomatoes and shredded lettuce may also be stuffed into the pocket.

UNIT 7
LOCALLY-PRODUCED VEGETABLES: GARDEN CROPS AND FARMERS' MARKETS

FOODS TO BE PREPARED

Vegetables & Beef Stir-Fry

TIME NEEDED

One hour, 30 minutes

FOODS NEEDED (other than staples)

One-half pound boneless round steak, soy sauce, ground ginger or fresh ginger root, 2 carrots, 2 small zucchini, 1/4 pound fresh mushrooms, green onions, fresh pea pods (optional)

OVERVIEW

The 4-H'ers will learn about production of vegetables and will be able to cook vegetables in a variety of ways. They will also have a basic understanding of the nutritional contributions of vegetables to the diet.

KEY POINTS

Introduction

Home gardeners grow their own food to save money and because they like the taste of home-grown food. The length of the growing season and the average temperature determine which crops are suitable for an area.

Food Preparation

Tender-crisp cooked vegetables are higher in nutrients and flavor than vegetables which are cooked until they are soft. Vegetables are tested with a fork to determine whether they are tender-crisp.

Meal Management

All plant material used to garnish foods should be edible.

Nutrition and Health

Nutrient-dense foods such as vegetables are low in calories and high in nutrients. Locally grown foods, eaten soon after harvest, are high in nutrients.

Safety and Storage

Guidelines for use of pesticides include:

1. Do not use unless there is a definite need for insect control.
2. Use only on crops affected by the insect or disease.
3. Select pesticides that are least hazardous to bees, other beneficial insects, and humans.
4. Do not apply more than needed.
5. Do not flush surplus pesticides down the drain.

IDEAS FOR ORGANIZING THE MEETING

A. Fitting in Fitness (10 minutes)

The 4-H'er(s) who volunteered to prepare the exercise session should lead this segment. Some exercises they may like to use follow.

1. **Arm Circles** (firms upper arm and chest muscles): Stand with feet about 12 inches apart and arms outstretched. Rotate arms in circles, backwards first, then forwards.
2. **Bent Knee Curl-ups** (strengthens abdominal muscles): Lie on back with knees bent, feet on floor. Clasp hands behind neck. Raise left knee and cross it over right. Using your abdominal muscles, slowly lift up head and shoulders, keeping back flat on floor as you lift shoulders. Hold for ten seconds; then relax. Repeat two more times. Switch legs and repeat.
3. **Side Leg Raise** (strengthens muscles on front of thighs): Lying on back, raise knees to chest; extend legs until perpendicular to floor. Slowly lower legs to the sides in a V position; raise legs until together again.
4. **Knee Push-ups** (strengthens arms, shoulders and chest muscles): Lie on floor, face down; hands on floor under shoulders, palms down. Push upper body off floor until arms are fully extended and body is in straight line from head to knees. Lower until chest touches the floor.
5. **Run and Hop** (cardiovascular endurance: strengthens heart muscles, legs, and hips): Run in place or around the room, lifting feet four inches high (left plus right is one count). After each 50 counts, jump up and down ten times lifting feet four inches off floor. To receive maximum benefit from this exercise, it should be done for at least 15 minutes. Encourage the youth to increase their cardiovascular endurance through a fitness program.
6. **Cool Down:** With knees bent and back straight, sit cross-legged on floor. Extend arms in front of you. Bend forward from hips until you feel stretch in hips, buttocks, and lower back. Hold for 30 seconds. Relax; repeat.

B. Introduction to Unit 7 (15 minutes)

American families now purchase so much of their food supply from grocery stores that it is difficult for urban youth to feel any connection with the production of food. Begin the discussion by asking what foods each of the 4-H'ers' families produce for their own use. Contrast the current situation with that of 100 years ago when families purchased very little food. The "Food Supply: Then and Now" activity will help the 4-H'ers understand the idea that their own ancestors used to produce much more of their own food supply than most families now produce. Ask the youth to take the sheet home and discuss it with their parents as they fill it out. You could have each club member bring the sheet back next week so the group can compare answers. Perhaps one of the 4-H'ers would like to compile the information for a display on "Food Supply: Then and Now."

C. Food Preparation (40 minutes)

1. Cut beef into strips, put into marinade for 30 minutes.
2. Prepare vegetables for stir-fry.
3. Wash preparation dishes.
4. Stir-fry beef and vegetables.

D. Eat/Evaluate/Discuss (15 minutes)

Eat the foods prepared. Evaluate by the criteria listed in the Member Manual.

Review the key points of the lesson, including cooking vegetables until tender-crisp, garnishes, nutritional value of vegetables, use of locally-grown foods, and safe use of pesticides. The questions which end the Unitin the Member Manual can be used to help the youth summarize some of the key points.

Later in this unit, the youth will plan and prepare a meal. You may want to talk about different ways of serving foods in preparation for the meal. Three styles of service they could choose from are:

Family Service - All foods are ready when the diners are served. The food is placed in serving

dishes and placed on the table with serving spoons. The persons nearest each food serve themselves, then pass the food to the person on their right. The food is passed around the table and returned to its original place.

Plate Service - Food is placed on the plates in the kitchen and the filled plates are served to the guests. If many plates are to be filled, there is a problem of keeping the food the right temperature while serving. If the 4-H'ers choose this method, they will need one server for every 4-5 guests.

Buffet Service - Food is arranged on a table so that guests can walk by and serve themselves.

E. Clean Up (10 minutes)

F. Closing and Planning Ahead

Ask for a volunteer to plan a ten minute exercise session for next meeting. Ask who can bring some hunted or gathered foods to the next meeting such as wild game, fish, or berries.

UNIT 8
LIVING OFF THE LAND: HUNTED AND GATHERED FOODS

FOODS TO BE PREPARED

Braised Game Steaks, Pan-Fried Fish or Microwave Cooked Whole Fish, Fresh Huckleberry Pie

TIME NEEDED

One hour, 45 minutes

FOODS NEEDED (other than staples)

Braised Game Steaks: 1 pound wild game or beef round steaks

Pan-Fried Fish: 2 pounds small fish

Microwave-Cooked Whole Fish: 2 pounds small fish

Fresh Huckleberry Pie: 4 cups huckleberries or blueberries

OVERVIEW

The 4-H members will learn about use of wild, edible foods in the past and present time.

KEY POINTS

Introduction

The Pacific Northwest had a bountiful food supply before agriculture was introduced to the area.

Food Preparation

Tough meat can be tenderized by mechanical means (meat hammer), chemical means (powdered meat tenderizer), and braising (cooking by browning in fat, then simmering in a small quantity of liquid in a covered container).

Fish cooks quickly and is easily overcooked.

Fresh Huckleberry Pie uses cornstarch to thicken the filling.

Meal Management

When planning meals, decide the amount of time needed to prepare each dish and the time to begin preparation of each dish.

Safety and Storage

Hunted and gathered foods need to be carefully handled in the field to prevent spoilage.

Be sure wild plants are edible before eating them.

Nutrition and Health

Outdoor activities such as hunting, fishing, and gathering foods can reduce stress and develop physical fitness.

Be a Wise Consumer

Preservation of adequate numbers of breeding stock and habitat preservation or restoration are essential for wild plants and animals.

IDEAS FOR ORGANIZING THE MEETING

A. Fitting in Fitness (10 minutes)

The 4-H'er(s) who volunteered to plan the exercises should lead this session. Some of the exercises from Unit7 can be used if needed.

B. Introduction to Unit8 (15 minutes)

Ask the 4-H members what wild, edible foods they have eaten. Then ask if they have ever hunted game, gone fishing, or picked wild plants. Tell them that many thousands of people lived in the Pacific Northwest before any agriculture occurred here.

Activity: Pin a map of the Pacific Northwest states on the wall. Look at the rivers in the three states. Discuss very briefly the life cycle of salmon and steelhead which live as young fish in small inland streams, then enter the rivers and travel to the ocean where they live for several years until they return via the rivers to their birthplaces to reproduce by spawning. Until recent times, the rivers contained enormous numbers of salmon and steelhead during spawning season. Construction of dams on the rivers and overfishing have greatly reduced the fish runs.

Trace the path salmon and steelhead would have followed to come to your locality on the map. Do salmon and steelhead still come to the area, or is their route blocked by dams?

C. Food Preparation (50 minutes)

Decide which foods to prepare based on what "wild" foods are available to you. If you have none, substitute some purchased foods. There is not enough time to prepare a pie shell, make the pie, and cook meat and fish in one meeting. If you want to teach the 4-H'ers to make a pie shell, you should plan an additional meeting for making the pie. If you follow the food preparation schedule for this lesson, use a frozen, prepared pie shell or one you or a 4-H volunteer has made prior to the meeting. If you happen to have huckleberries, game, and fish, here is a time schedule for preparing all three recipes:

1. Prepare pie; put filling into cooled pie shell; put pie into refrigerator to chill. (15 minutes)
2. Prepare game steaks; brown, then simmer them for 20-30 minutes. (20 minutes to prepare)
3. Fix pan-fried fish. Fry the fish while the meat is braising. (15 minutes)

D. Eat /Evaluate/ Discuss (15 minutes)

Eat the foods you prepared. Evaluate them by the criteria listed in the Member Manual. Focus the discussion on the aspects of the Unitthat will be of most interest to your club members.

If some members hunt and gather wild foods, you may want to discuss care of wild foods in the field to preserve quality and prevent spoilage. If any of the youth have parents who hunt or gather foods, invite them to talk to the group about care of wild game, fish, or plants. Get Cooperative Extension bulletins on care of fish and game to show to the 4-H'ers. If none of the youth use hunted and gathered foods at home, the discussion could focus on the value of outdoor recreation and ways to preserve recreation land.

E. Clean Up (10 minutes)

F. Closing/Planning Ahead (5 minutes)

The closing activity of this unit is to prepare a meal. You will need a planning meeting to decide the menu and to make other plans for the meal. Ask 4-H members to read Unit9 before the planning meeting.

UNIT 9
PUT IT ALL TOGETHER

FOODS TO BE PREPARED

Planned by group.

TIME NEEDED

Planning session - 1 1/2 to 2 hours; Preparing and serving meal - about 3 hours (depends on meal chosen).

OVERVIEW

The 4-H club members will work as a team to plan and prepare a meal of Pacific Northwest foods.

The closing activity is an opportunity for your club to share what they have learned with others. Help the group plan this sharing time by carefully guiding them through the planning process.

Step 1 - Decide the type of event which would work well to show what has been learned. A meal is an excellent way to demonstrate the food preparation skills they have learned. Encourage the youth to also prepare some displays, posters, or demonstrations to share information about topics other than food preparation.

Ask the 4-H'ers about the "big ideas" from each lesson. Which of these ideas do they want to share?

Step 2 - Decide who to invite to this sharing time. Parents and friends will probably be suggested. Ask the youth if they would also like to invite some people who work in food-related jobs. What about other persons in your community who would be interested in what the 4-H'ers have to share? County Extension agents, senior citizens, home economics teachers, and food editors of newspapers might be persons the 4-H'ers would enjoy getting to know while they share what they have learned in the unit.

The meal could be a fundraiser for the group if they serve a catered meal.

Step 3 - Decide where the event will be held.

Step 4 - Decide when the event will be held.

Step 5 - Decide how to pay the costs of the event.

Step 6 - Develop detailed plans. Planning a group meal will help the youth put together many of the meal management principles they have learned. You may want to have available some cookbooks or other reference materials which cover meal planning basics. Your county Extension office may also have some bulletins which will be helpful in planning a meal.

As the 4-H'ers are planning the meal, they will need to think about the resources they have for the meal as well as thinking about how the foods go together. Questions they should consider are:

1. Do the tastes of the foods blend well together? Usually meals have several mild-flavored foods and a more highly seasoned food. A meal of all bland foods is unappealing. A meal with several different strong flavors is an overload of the taste buds.

2. Do the colors, shapes, and textures of the foods blend well together? Intensely colored foods need white and brown for contrast. Be cautious about serving several different red foods at the same meal because the colors may clash and look unattractive together. Liven up white foods with garnishes or colorful foods on the plate. Remember to consider the color of the plate.

A variety of shapes is more appealing than a meal with all shapes similar. To assure appealing texture variations in meals, check the foods for contrasts of soft and firm, pliable and crisp, smooth and rough, thin and thick, moist and dry. A contrast of hot and cold foods adds variety and interest to a meal.

3. Is the meal nutritionally balanced? Does it include a variety of foods, including fruits, vegetables, bread or cereal, meat or meat alternative, and a dairy product? Are the recipes relatively low in fat, sodium, and sugar? If a high-fat or sweet food is included, serve small portions of it.

4. Is the skill level of the cooks compatible with the foods selected to be cooked?

5. Can the foods be prepared in the time allotted? (Allow a little extra time for unexpected happenings.)

6. Can the foods be purchased within the planned budget? How will the group raise money to pay for the foods?

7. Can these foods be prepared, cooked, and served in the space available?

Guide the 4-H'ers as they plan their meal. Be sure the final meal plan is theirs, reflecting what they want to share with their guests. However, you also want to be sure that their plan is feasible. If you think that the meal plan needs some changes, make gentle suggestions.

Step 7 - Decide how to carry out the plans. Tasks to be done before the meal include: making a grocery list, buying groceries, making up a time schedule for preparing the meal, and preparing and mailing invitations.

If the group plans to have some exhibits, posters, or demonstrations, decide who is responsible for these.

Make a detailed time schedule for preparing and serving the meal. If exhibits, posters, and demonstrations will be presented, plan time and space for them.

Close the planning meeting by reviewing the plans with the group. Check to be sure that all your bases are covered. A task chart may be helpful in planning who will do each task. A sample task chart is included. You may want to have some team captains (teen leaders and/or parents) to supervise or coordinate some parts of the meal.

	PEOPLE					
TASKS (in order)	Susan	Tom	Ken	Barb		PERSON(S) RESPONSIBLE
Buy Groceries	o	*	√	*		Tom & Barb
Schedule the Building, Set Up	√	√	o	*		Barb
Invitations—Buy and Mail	*	√	o	√		Susan
Prepare the Main Dish	*	√	*	√		Susan & Ken
Prepare Salad	*	*	*	√		Tom
Prepare Other Dishes	*	o	√	*		Barb
Serve	√	o	o	o		Tom & Ken
Clean Up	√	√	*	√		All
Press Release	*	√	o	o		Susan

* Like to do / do well

o Over my dead body

√ Neutral about the task

People with asterisks do the task.
No one should have more than three tasks.
Everyone should participate in the meal preparations and cleanup.

UNIT 10
WORKING WITH FOOD: CAREERS AND HOBBIES

TIME NEEDED

One to one and one-half hours

OVERVIEW

This unit is designed to have the 4-H'ers evaluate their meal, learn about careers which involve working with food, and plan for the next year.

KEY POINTS

Evaluation is an important part of the learning process. Food-related careers are varied. The occupations described are dietitian, food processor, food buyer, food sanitarian, and chef. Meal preparation at home involves some of the tasks these persons do in their work.

IDEAS FOR ORGANIZING THE MEETING

A. Evaluate the Meal. (15 minutes)

Ask group members to evaluate the meal from Lesson 9 and their experience in sharing other information by exhibits, posters, and demonstrations.

Ask questions such as the evaluation questions in the Member Manual. What parts of the event were particularly pleasing to them? What changes would they make if they were to hold the same event again?

B. Discuss Food-Related Careers. (30-45 minutes)

Ask how many of the youth have a parent whose job involves working with food. Then ask about friends and other relatives who have food-related jobs. On a newsprint pad, write down all food-related careers that the youth list. The 4-H'ers will probably find that they know many people whose job involves food in some way.

Five occupations are highlighted in the Member Manual. Point out that some of the tasks these people do are also done at home. Look in the classified advertisement section of the newspapers to see what kinds of food-related jobs are available in your area.

C. Make Future Plans. (15 minutes)

Talk with the group about other 4-H projects that are available. You may want to get some project manuals from the County Extension office so the youth can see there are many other opportunities for learning and fun in 4-H.

SUPPLEMENTAL UNIT: FOOD, EXERCISE, AND HEREDITY

This unit is optional and may be included at any time during the project year. The member manual does not contain any material for this unit.

TIME NEEDED

40-60 minutes

OVERVIEW

This unit is designed to help the youth learn about the importance of food, exercise, and heredity in determining body size and shape.

Before leading this discussion, be sure to read the Supplemental Information on Food, Exercise, and Heredity.

KEY POINTS

Body type is determined by heredity. Body shape is determined by inherited body build, amount of energy consumed in food, and amount of energy used in physical activity.

IDEAS FOR ORGANIZING THE MEETING

A. Collect discarded popular magazines, scissors, and tape or glue.

Hand out the magazines and ask the youth to make collages of "Attractive Women" and "Attractive Men." Display the collages in front of the room while you discuss these questions:

1. Are most women satisfied with their bodies? What about men? Why or why not?
2. Where do we get our ideas about what an appealing body looks like?
3. Is the way we feel about our own bodies influenced by what the opposite sex finds appealing and attractive?
4. Are there parts of our bodies we can change?
5. What about the parts we can't change? Do parts of our bodies affect our humor, our intelligence, our friendliness, or our ability to love and be loved?
6. Are there things about our lives that are affected by our bodies? Give some examples.

Adapted from: Life Planning Education, The Center for Population Options, Washington, D.C., March 1985.

Points to emphasize during discussion:

Many people are unhappy with the way they look. Often things that some people feel are extremely noticeable flaws aren't even seen by others.

When a lot of people think a certain figure is good-looking, this type becomes the ideal figure.

Forty years ago in the United States, the ideal female figure was a rounded, full-busted figure. Ten years ago, a very thin figure was considered ideal. With an increased interest in physical fitness, a larger, more muscular body type is becoming the ideal female figure.

The ideal figure type for American males has not changed as dramatically; however, the recent swing is toward an increase in muscle development in the ideal male figure.

We inherit our body builds and cannot change them.

Some people have long, lean bodies with a light skeletal structure and small muscles. They can often eat large amounts of foods without gaining weight. The term used to describe these people is ectomorphic.

Mesomorphic people have large, heavy frames and heavy muscle development. Since mesomorphs have a large amount of bone and muscle, they may weigh more than their "ideal weight" without being overfat.

People who have round, soft body contours are called endomorphs. Endomorphic people may have trouble maintaining their ideal weight because their bodies easily store fat.

We cannot change our basic body build, but we can make the most of the body type we inherit by eating right and developing a lifestyle that keeps us fit.

Persons whose body types are quite different from the ideal figure may not like the way they look. For example, persons with round, full figures may starve themselves to develop a lean figure.

Teens cannot change their body type, but they can learn to accept the type of body they have. Exercise and wise food choices help teens develop their own bodies to the optimum for the genetic potential.

Body shape is determined by inherited body build, amount of energy consumed in food, and amount of energy used in physical activity. Getting taller and gaining weight are a normal part of the teenage growth cycle.

Regardless of body build and weight, the best way to feel good about yourself is to:

1. Be physically fit.
2. Eat nutritious foods, avoid fad diets, and don't skip meals.
3. Get enough rest.

Pass out handouts on "My Self-Image" and "My Body Shape" to each 4-H member. Ask them to take them home and spend a few minutes completing the handouts. (Some teens are very sensitive about their body size, so it is best to have the members of your group complete the handouts at home rather than in the group.)

SUPPLEMENTAL INFORMATION ON FOOD, EXERCISE, HEREDITY

No health problem related to nutrition is of more interest or importance to teenagers than weight control. Youth want to be slender. Boys want a trim body with good muscle development and no extra fat. The feminine ideal has been the slim model — slim almost to the point of being skinny. Few young people really consider whether this body image is possible or even desirable for themselves.

Do-it-yourself dieting is a very prevalent practice among teenagers. In fact, one study showed that by the time adolescence is reached, a large percentage of teenagers have been, are, or intend to be on weight reduction diets. Yet few of these youths have taken the time to find out:

- If weight reduction is really necessary or desirable.
- How much weight should be lost.
- How fast weight loss should occur.
- Whether the necessary nutrients are eaten during weight reduction.
- How weight can be maintained at a lower level once that level is reached.

We usually think of diets as attempts to lose weight because far more people are overweight than underweight. Those who are painfully thin have an equally frustrating problem trying to obtain and maintain desirable weight. Small appetites coupled with an honest dislike for high calorie foods makes gaining weight a loathsome task which may be more difficult to accomplish than losing weight. Some teenagers become so obsessed with being thin that they starve themselves (anorexia) or binge and purge (bulemia).

THE OVERWEIGHT YOUTH

Many teenagers in American society are overweight. For some, the best advice is eat moderately, relax, and wait. Many adolescents go through a phase just before puberty when weight gain precedes growth in height. Formerly slender or average weight children now look definitely chubby. Fearing a lifetime of being "fat," they often begin a cycle of reduction diets. Such concern may not be warranted because this so-called transient obesity often disappears by mid-adolescence when linear growth is very rapid.

Other adolescents are not so lucky. For them, weight control will be a life-long problem. The chubby baby very often becomes a fat child, an overweight adolescent, and an obese adult. So to prevent going through life as a fat person, adolescence is the time to do something about it. During the teenage years, there's a good chance to achieve weight reduction and control because rapid growth and high energy requirements allow a reasonably high caloric intake even when on a restrictive diet.

Because nutritional needs are so high during adolescence, it is extremely important that obese teenagers practice intelligent food habits while they restrict energy intake. It's just common sense to know and practice good nutrition when considering something as vital as permanent control of body weight.

There is no lack of information about dieting. Unfortunately, many popular diet recommendations are not based on fact. A diet does not have to be wise to be popular, it just has to have publicity.

Teenagers' magazines often tell how some popular entertainer, athlete, or model keeps "fit not fat." Unfortunately, many of these articles ignore good nutrition while concentrating on weight loss. Much of the advertising for weight control products ignores the basic fact that weight control is a balance between energy taken in, in the form of food calories, and energy expended as exercise.

LEARN ABOUT CALORIES

Calories do count. The term "calorie" refers to the heat-producing potential of food. If burned, the food would give off a certain amount of heat, measured in units called calories.

Food energy is necessary for the body to function. If too much energy is taken in, the body thriftily stores the excess as body fat. It is true that some people require many more calories than others just to maintain body weight. Each person must find the level of intake that is right for himself/herself.

The National Research Council makes recommendations for teenagers and other age groups. These are average figures and may be too generous for some and not liberal enough for others. However, they are a good starting place to find out how many calories the body needs per day.

The following are the Recommended Daily Dietary Allowances for calories by the National Research Council. Individual needs vary. These are listed simply to give you an idea of calorie needs.

Boys:	Age 11 to 14	2700 calories/day
	Age 15 to 18	2800 calories/day
Girls:	Age 11 to 14	2200 calories/day
	Age 15 to 18	2100 calories/day

Knowledge about the caloric content of food enables teens to choose food wisely. Weight for weight, foods that have a high fat content have over twice the calorie content of foods that are predominantly carbohydrate or protein.

- Foods with a high water content have fewer calories than drier foods.
- Starchy foods (bread, spaghetti, etc.) do not cause a person to deposit more body fat than other foods with the same calorie level. The extra calories added by sauces, fat, and sugar give them their bad reputation.
- Cooking methods which do not add fat or which allow the fat to drain off significantly lower the calorie content of many foods.
- Skim and 1% milks are a good source of nutrients but have significantly less calories then whole milk. Because milk furnishes most of the calcium in the American diet, teenage dieters should not cut calories by skimping on their milk intake.

LEARN ABOUT EXERCISE

Although Americans are busy, most do little vigorous exercise as a part of normal living. Teenagers drive or are driven from one activity to another. Automation has taken over many chores and youth must go out of their way to make sure physical activity is a part of daily living.

Regular exercise coupled with sensible food habits is the best way to control weight. The exercise need not be vigorous or tiring. Small changes in exercise patterns are important. Just walking up stairs instead of taking the elevator or walking to school rather than riding can, if continued regularly, make a difference in body weight.

Youths who have a weight problem and don't really enjoy physical exercise may have to choose between always being a little hungry or learning to enjoy and participate regularly in active physical exercise.

LEARN THE ROLE OF HEREDITY

A person's basic body build can be blamed on his or her ancestors. Body builds are divided into three basic types.

Ectomorphic

Individuals with a long, lean body build characterize this type. The skeletal structure is light and the degree of muscle development is small. Ectomorphs are seldom overweight but they may be overly lean. They can often eat seemingly unlimited amounts of food without gaining weight.

Mesomorphic

These are individuals with large, heavy frames and heavy muscle development. The "ideal" football player with broad muscular shoulders could be classified as having this type of body build. The scales may read high for mesomorphs because bone and muscle are heavy; however, they usually cannot be classed as overfat.

Endomorphic

Persons whose body contours are round and soft, well covered with fatpads, are of this type.

Endomorphs have trouble maintaining reasonable weight and because they easily store fat, they may quickly become obese.

Individuals may have different degrees of each of the body types, though combinations of mesomorph and endomorph are the most common. A sensible and happy person learns to accept the type of body build she or he has. Although a person can alter the amount of fat on his body, little can be done to change the amount of bone or muscle.

The correct weight for any one person must be judged in relation to body build. It is foolish to think that a girl with broad shoulders and heavy hip bones can ever weigh the same as her thin, light-boned friend. The goal for any weight control program is a reasonable weight for the particular person's height and body build.

SEEK PROFESSIONAL HELP

Teens who are more than a few pounds overweight should be encouraged to work with a physician or a dietitian if they want to lose weight. Teens who seem overly obsessed with keeping themselves thin may need professional help to prevent or treat eating disorders such as anorexia or bulemia.

MAKE A PLAN AND FOLLOW IT ALL THE WAY TO YOUR GOAL

Crash diets seem an easy, quick solution to losing weight. Unfortunately, they usually fail and then the dieter searches for a new magic diet that will quickly result in weight loss. It is much better to determine whether weight reduction is needed. Then, if it is, make a plan and follow it for slow, steady reduction that will last.

Most overweight adolescents gained their extra weight over a period of several years. It isn't unreasonable to spend a few months or even a year correcting the food habits and/or activity pattern that caused the problem in the first place. It is a long, slow process.

Many people can help the teenager who wants to achieve weight gain or loss. Physicians, nutritionists, parents, teachers, and 4-H leaders can each provide insight into whether weight gain or loss should be attempted and can make suggestions for healthy weight control. Friends can provide the motivation and encouragement. As a 4-H leader, you may be able to help some 4-H'ers achieve a realistic image of their ideal body weight and then help them work toward this ideal body weight.

Adapted from "It's Your Move - 4-H Teen Nutrition Education Program," by Susan Travis, Division of Nutritional Sciences, Cornell Cooperative Extension, Cornell University.

My Body Shape

AGE: _____ SEX: _____ WEIGHT: _____ HEIGHT: _____ ☐ Short ☐ Medium ☐ Tall	BODY BUILD: ☐ Endomorph [round & soft] ☐ Mesomorph [muscular] ☐ Ectomorph [slender] ☐ Combination of _____ and _____	BODY CONDITION: ☐ Excellent ☐ Good ☐ Poor

Do you wish you were ☐ lighter? ☐ heavier? ☐ the same?
How do you feel about the way you look?

In five years how do you want to look?

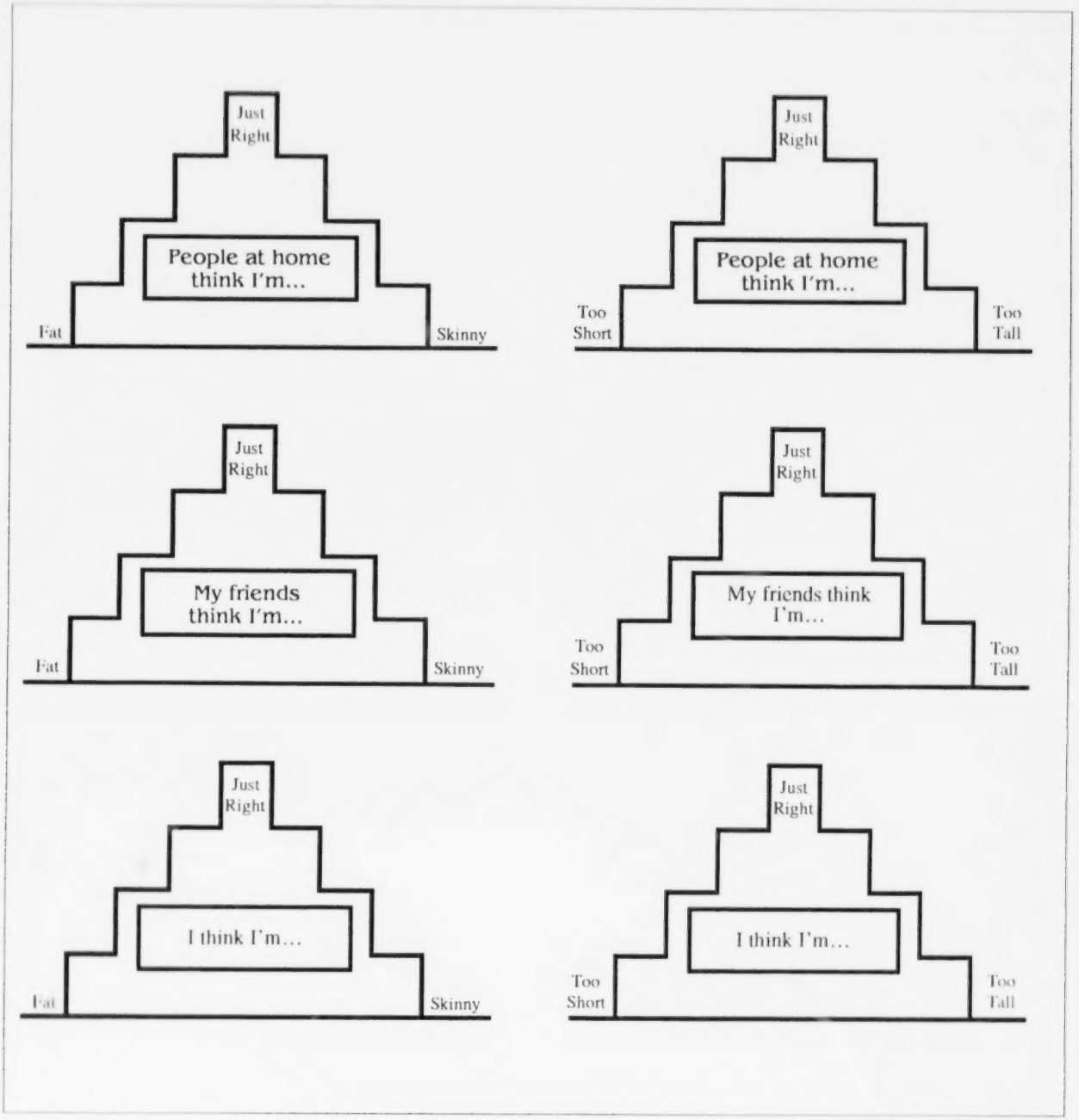
Are you trying to change the way you look? ☐ Yes ☐ No
If yes, how?

What is your favorite way to excercise? How often do you do it?

Do you have enough coordination and strength to do and enjoy things? ☐ Yes ☐ No
I would like to take better care of my body by:

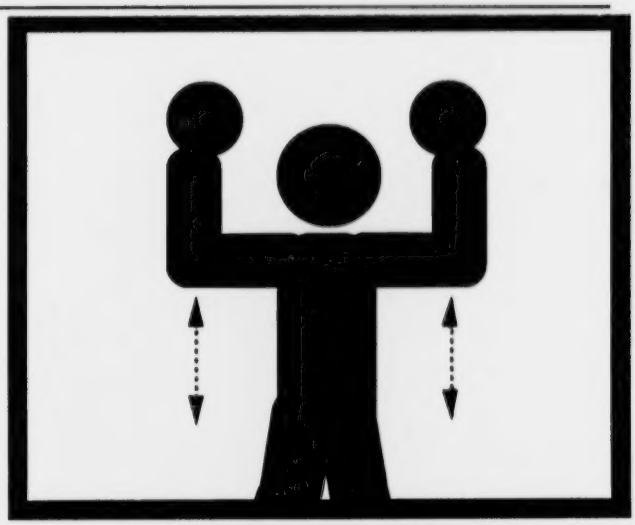
Endomorphic—the abdomen tends to be larger than the chest, and all parts of the body are soft and round; the hands and feet are comparatively small.	*Mesomorphic*—the chest is muscular and much larger than the abdomen; body muscles are well-developed and joints are prominent.	*Ectomorphic*— the whole body is long and lean; muscles are strong and bones are delicate. Hardly any ectomorphic people become obese, no matter how much they eat.

My Self Image



Put a stick figure [🧍] on one step of each ladder that best describes your opinion of yourself. Are there differences in the way people at home, your friends, and you look at your body build?

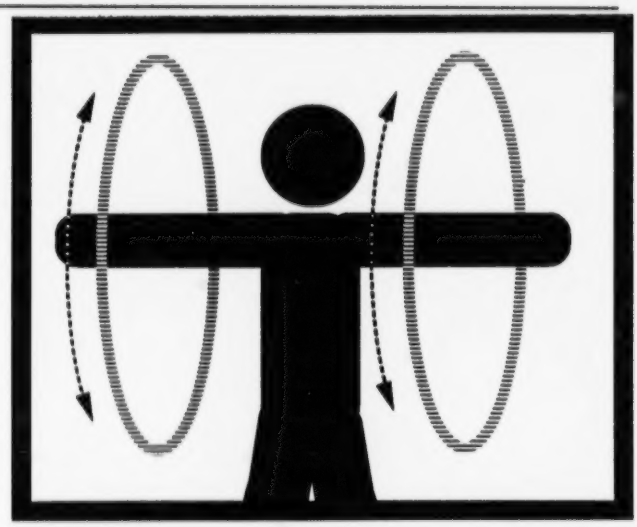
Unit 2:
Overhead Press



Unit 3:
Bent Leg

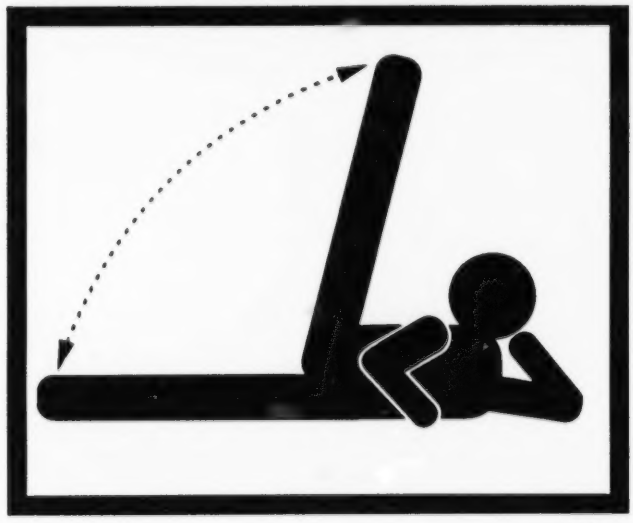
Unit 5:
Leg Hops

Unit 7:
Arm Circles



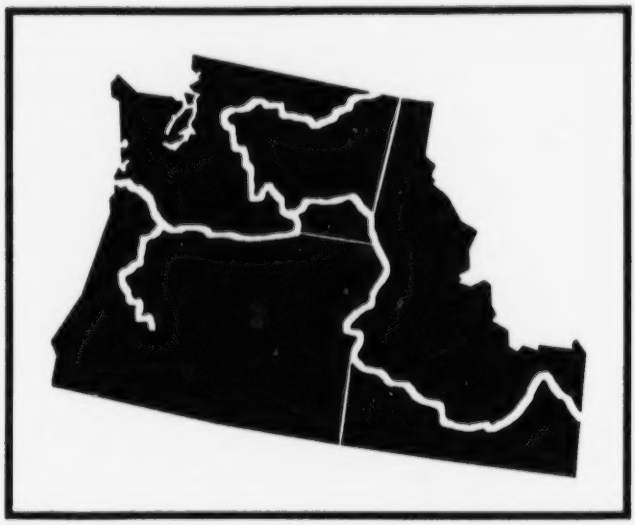
Bent Knee
Curl-ups

Side Leg Raise



Unit 7:
Knee Push-ups

Cool Down

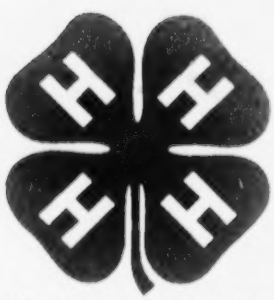


A Pacific Northwest Extension Publication
Washington Oregon Idaho

Pacific Northwest Cooperative Extension bulletins are joint publications of the three Pacific Northwest states–Washington, Oregon, and Idaho. Similar crops, climate, and topography create a natural geographic unit that crosses state lines. Since 1949, the PNW program has published over 250 titles. Joint writing, editing, and production has prevented duplication of effort, broadened the availability of faculty specialists, and substantially reduced costs for the participating states.

Issued by Washington State Cooperative Extension, F. L. Poston, Director; Oregon State University Extension Service, O. E. Smith, Director; University of Idaho Cooperative Extension Service, H. R. Guenthner, Director; and the U. S. Department of Agriculture in furtherance of the Acts of May 8 and June 30, 1914. Cooperative Extension programs and policies comply with federal and state laws and regulations on nondiscrimination regarding race, color, national origin, religion, gender, age, disability, and gender preference. Trade names have been used to simplify information; no endorsement is intended.

Published December 1988. $1.25/0.00/1.25 PNW336



More boys and girls belong to 4-H than any other youth group.

FOODS of the PACIFIC NORTHWEST

Project 2

Member Manual

Val Hilliers

PNW335

Foods of the Pacific Northwest

The intermediate materials for the Foods of the Pacific Northwest project are the work of the Tri-State Food/Nutrition Curriculum Committee. This committee developed the components, concepts, and objectives for an overall food and nutrition curriculum for the three states. Three projects, one each for beginning, intermediate, and advanced levels, and an enrichment guide are part of that curriculum.

A special thanks to the many leaders and Extension agents from the three cooperating states who reviewed the materials and provided helpful suggestions in the process of preparing the member manual and leader guide.

Acknowledgement and appreciation is expressed to the following committee members:

Idaho	Oregon	Washington
Lois Glenn	Cheryl Carlson	Alice Weber
Linda Hamilton	Sally Ishikawa	Esther McLatchy
Rosa Smith	Elaine Husted	Bonnie Brown
Mary Lee Wood	BarbaraW.Boltes	Jan Hiller
Marilyn Swanson	Margaret Lewis	Val Hillers

Consultant: Eleanor Wilson
Editor: Marianne Kurth
Typography: Clint Keller

Foods of the Pacific Northwest

An Intermediate Level 4-H Food and Nutrition Project

Unit 1 The Pacific Northwest: A Fruit-Lover's Paradise ____ 1

Food Preparation
Berry Sauce
Vanilla Pudding

Unit 2 Foods Under Our Feet: Potatoes & Onions ____ 5

Food Preparation
Potato Soup
Clam Chowder

Unit 3 A Tasty Combination: Lentils and Pork ____ 8

Food Preparation
Polish Lentils

Unit 4 Say Cheese, Please ____ 11

Food Preparation
Cheese Enchiladas

Unit 5 Poultry: Food With Wings ____ 14

Food Preparation
Herbed Chicken Bites

Unit 6 Wheat: The World's Most Important Grain ____ 19

Food Preparation
Quick Wheat Bread
Cranberry Walnut Bread
Tabbouli

Unit 7 Locally-Produced Vegetables: Garden Crops and Farmers' Markets ____ 23

Food Preparation
Vegetables & Beef Stir-fry

40

Unit 8 Living Off the Land: Hunted and Gathered Foods 27

Food Preparation
Braised Game Steaks
Pan-Fried Fish
Microwave Cooked Whole Fish
Fresh Huckleberry Pie

Unit 9 Put It All Together 31

Unit 10 Working With Food: Careers and Hobbies 33

Supplemental Unit: Food, Exercise, and Heredity 37

UNIT 1
THE PACIFIC NORTHWEST: A FRUIT-LOVER'S PARADISE

KEY POINTS

In this unit you will learn:

- About fruits grown in the Pacific Northwest.
- To make and store fruit sauce and pudding.
- About the dietary guidelines.
- About nutritional value of fruits.
- How to purchase and store fresh fruits.

INTRODUCTION

Can you name three things that apples, pears, cherries, peaches, plums, raspberries, and strawberries have in common? They are all fruits, they are all members of the rose family and they are all grown in the Pacific Northwest!

Cultivation of fruits dates back thousands of years. Before humans knew how to cultivate fruits, they harvested wild fruits. Apples are more widely grown than any other fruit because apples grow everywhere except in the hottest and coldest regions of the world. Some fruits such as raspberries, blueberries, and strawberries need more special growing conditions and do best in a cool, moist climate.

IN THE PACIFIC NORTHWEST

In the Pacific Northwest we have a wide variety of climates: from damp to dry, from sea level to mountain top, and from cool to hot. This variation in climate makes the Pacific Northwest a fruit-lover's paradise. From early summer until late fall, a succession of fruits ripen in Idaho, Oregon, and Washington.

Is there anything more delicious than the first vine-ripened strawberry of the summer?

Perhaps your favorite is another berry—blackberries, cranberries, blueberries, and raspberries are all grown in the Pacific Northwest. If you prefer a more "exotic" taste, pick wild huckleberries in a mountain meadow.

But northwesterners don't have to be satisfied with just eating berries grown in our region. We also produce tree fruits such as apples, pears, cherries, nectarines, peaches, apricots, and plums. Grapes are grown to make into juice or wine.

Many berries that grow well in a cool, moist climate are grown on the west side of the Cascade Mountains. The tree fruits and grapes are usually grown in the hotter, drier areas of the Pacific Northwest. In the dry areas, fruit production depends on irrigation.

FOOD PREPARATION

Ripe fruit is delicious to eat raw. A mixture of fresh fruits on a tray is attractive and a treat to the taste buds. You can also make a wide variety of desserts from fruits.

A thickened fruit sauce is easy to fix and can be used as topping for pound or angel food cake, pancakes, waffles, or ice cream. A berry sauce over vanilla pudding is pretty and tastes good, too. To make the dessert a little more fancy, pour the pudding into a baked pie shell and chill. Top with fruit sauce just before serving.

You can substitute almost any fruit in this recipe. Keep the same proportions of cornstarch and liquid and try other berries, peaches, or pears. Fruits which are presweetened need no additional sugar for the sauce. Add only a small amount of sugar to unsweetened fruits so that the fruit taste is not hidden by the sweetness.

BERRY SAUCE (Makes 1 1/2 cups sauce)

1 package (10 oz.) frozen, sweetened raspberries or strawberries, thawed and drained or 1 1/2 cups fresh berries*
4 teaspoons cornstarch
1/2 cup liquid (berry juice, plus additional water to make 1/2 cup)

1. Mix together cornstarch and 1/2 cup liquid (fruit juice plus water).
2. Heat until thick and bubbly, stirring constantly.
3. Stir berries gently into sauce.

Microwave-cooked Berry Sauce

To adapt recipe for microwave cooking:

A. Follow step one, combining ingredients in a one quart measuring cup or glass casserole dish.

B. Cook at medium-high until thick and bubbly, 2-4 minutes, stirring once or twice during cooking.

C. Stir berries gently into sauce.

Sprinkle sugar over berries and let sit for 30 minutes. Drain juice to use for liquid in making sauce. *If you are using fresh berries, use 1 1/2 cups fresh berries and 1/4 cup sugar.

VANILLA PUDDING (Makes 4 or 5 servings)

2 egg yolks or 1 egg
1/2 cup sugar
2 tablespoons cornstarch
1/4 teaspoon salt
2 cups lowfat milk
2 tablespoons butter or margarine
1 teaspoon vanilla

1. Beat egg yolks or egg in a medium bowl until thoroughly mixed. Either a fork or a wire whip can be used to beat the eggs.
2. Combine the sugar, cornstarch, and salt in a heavy saucepan. Blend the cornstarch thoroughly with the sugar. This helps prevent lumps from forming when the liquid is added.
3. Add the milk and stir until the dry ingredients are thoroughly blended with the milk.
4. Cook over medium heat, stirring constantly until mixture is thickened and bubbly.
5. Cook and stir two minutes longer so cornstarch will be thoroughly cooked and the pudding will not taste starchy.
6. Remove pudding from heat. Gradually stir about one cup of the hot pudding into the beaten egg. This step warms the egg before it is added to the hot mixture. If eggs are added directly to a hot mixture, they often curdle.
7. Add the egg/pudding mixture to the remaining mixture in the saucepan.
8. Cook and stir two minutes longer using a figure-eight motion for stirring to keep the pudding from sticking to the pan.
9. Remove saucepan from heat. Stir in butter or margarine and vanilla.
10. Spoon the pudding into sherbet or dessert dishes and chill thoroughly. Top with berry sauce. Refrigerate leftover sauce.

Microwave-cooked Vanilla Pudding

Puddings and fruit sauces are easy to prepare in a microwave oven. A pudding cooked on a range burner easily scorches or burns on the bottom so constant stirring is necessary. In a microwave oven, the microwave energy heats throughout, so puddings and thickened sauces cook much more evenly. You still need to stir them occasionally to keep the cooking temperature even.

To adapt recipe for microwave cooking:

A. Follow steps one, two, and three, combining ingredients in a one quart measuring cup or glass casserole dish.

B. Cook at high (100%) 5-7 minutes, stir every three minutes until mixture is smooth, thickened, and clear.

C. Follow instructions in steps six and seven for combining the hot pudding and beaten egg.

D. Cook pudding at medium-high (70%) for 1-3 minutes; stir after one minute.

E. Remove from microwave. Stir in butter or margarine and vanilla.

MEAL MANAGEMENT

Planning attractive, tasty meals takes some practice. What kinds of foods go well with a fruit dessert? Fruit desserts are sweet and usually have a soft texture. They are frequently brightly colored. When you plan a meal to go with them, think about using something crisp and crunchy to balance the soft texture of the fruit.

For a lunch you might serve submarine sandwiches, coleslaw, milk, and fruit sauce over pudding or cake.

This meal contains at least one serving of bread, fruits, vegetables, milk, and meat. You could prepare and chill the dessert and coleslaw, then fix the sandwiches just before lunch.

SAFETY AND STORAGE

Refrigerate puddings after they are made. When you make puddings or any other dish in which eggs are only lightly cooked, only use eggs with no cracks or checks in the shell. The eggshell helps keep bacteria from entering the egg. If the shell is cracked, bacteria can enter the egg.

NUTRITION AND HEALTH

Fruits are an important part of the diet. They are an important source of vitamin C, potassium, and fiber. Eat some each day.

Vanilla pudding with fruit sauce is a good-tasting dessert which is good for you. The basic ingredients are milk, eggs, and fruit. Each of these foods is nutrient-dense, which means it contains a lot of nutrients for its calorie content. The sugar and fat content is lower than in most desserts.

Even a nutritious dessert like pudding and fruit sauce should be used only occasionally. This dessert will provide about 10% of a teenager's daily energy needs and these amounts of other nutrients: 18% of suggested vitamin C intake, 9% of vitamin A, 6% of protein, 5% of calcium, and 3% of iron.

The United States Department of Agriculture and The Department of Health and Human Services have developed guidelines for a healthful diet. The Dietary Guidelines suggest that you:

1. Eat a variety of foods.
2. Maintain desirable weight.
3. Avoid too much fat, saturated fat, and cholesterol.
4. Eat foods with adequate starch and fiber.
5. Avoid too much sugar.
6. Avoid too much sodium.

The Dietary Guidelines focus on diet changes which will help you be more healthy. Plan meals which follow the Dietary Guidelines and be sure to include breads, cereals, or other grain products; meat, fish, poultry, or dried beans; fruit and vegetables; and dairy products in your diet. Also include regular physical activity as part of your healthy lifestyle.

BE A WISE CONSUMER

The best quality fruits are those which are grown in the region and picked shortly before purchase. Purchasing fruits when they are in season–ripe in your locality–will assure you the highest quality fruit. Prices for any fruit are usually lowest during the time when there is an abundance of the fruit.

Look at fresh berries carefully before buying. They should be brightly colored and without mold. Fresh strawberries should have the green cap attached because strawberries without caps lose their quality much more rapidly.

Fresh berries are fragile and quickly lose quality after they are picked. If one berry begins to mold, the mold will quickly spread to other berries. Buy or pick only as many berries as you can use in a day or two. Store the unwashed berries in the refrigerator and wash them just before using.

Tree fruits are less perishable than berries. Some, such as apples and pears, are stored for use all winter. Peaches, nectarines, cherries, and other "stone fruits" taste best if they are fully ripe when picked. However, fully ripe stone fruits are soft and easily bruised. These fruits are usually picked slightly green if they are to be shipped. The flavor is somewhat less intense if the fruit is picked before it is fully ripe. Locally grown fruit often has much better flavor because it can be picked when it is ripe.

FOOD ACTIVITIES

Experiment on Water Changes in Fruit

Purpose

To determine the effect of sugar on fresh fruit.

Materials needed

Measuring spoons and cups
1 sharp paring knife
1 tablespoon sugar
1/2 cup strawberries, washed, capped, and well-drained or 1/2 cup fresh, ripe peaches, washed, peeled, and sliced
2 pint glass jars with lids numbered #1 and #2

Procedure

1. Prepare fruit (either strawberries or peaches may be used)
2. Place 1/4 cup of fruit into container #1. Put lid on.
3. Place 1/4 cup of fruit a little at a time into container #2, sprinkling with sugar each time fruit is added. Put lid on.

4. Record the time. Observe after 30 minutes and after one hour. Is there a difference in liquid lost from the sweetened and unsweetened fruit?

Explanation

Why does the sweetened fruit lose more liquid? The liquid loss from the sweetened fruit is due to osmosis. Osmosis is the process in which a liquid moves through a film or membrane to balance out the concentration of sugars or salts on each side of the membrane. The cell walls of the fruit are the membrane. Inside the fruit cells are sugars. The fruit with no sugar added loses little water because the sugar concentration is highest in the fruit cells. However, when sugar is sprinkled on the fruit, the concentration of sugar is higher outside the fruit cells than inside the cells. The liquid leaves the fruit cells in order to equalize the concentration of sugar on each side of the cell wall. To make a fruit sauce with fresh berries, you need to sprinkle the fruit with sugar and let osmosis draw the fruit juice from the fruit.

IDEAS TO EXPLORE

A. Make a list of the types of fruits which are grown by the families of your 4-H club. Talk with some home gardeners to see what other types of fruits can be grown where you live.

B. What fruits are grown in your area to be sold commercially? Do these fruit orchards have people pick the produce they buy ("U-pick")? Are people hired to pick the fruit?

C. Investigate the life of the migrant workers who pick fruit. Where do they live during each part of the year? What are the advantages of being a migrant worker? What are the disadvantages? Do migrant workers harvest any crops in your area?

D. Talk to the produce manager of a local grocery store. What fruits are purchased from local fruit growers? From fruit growers in the Pacific Northwest? Ask the manager which fruits are imported from other countries. If there is a local farmers market, visit it and talk to some of the people selling fruit. Ask about the fruits they raise and the places they sell the fruit.

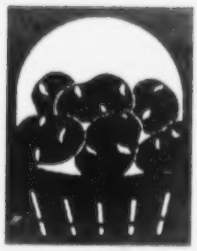
CHECK YOUR PRODUCT

Were your fruit sauce and pudding:

1. About the right thickness?
2. Smooth without lumps?
3. Cooked thoroughly without scorching?

CHECK WHAT YOU LEARNED

1. What fruits are grown in the Pacific Northwest?
2. What are the advantages of using a microwave oven to make puddings and sauces?
3. How do you store puddings safely?
4. What are the advantages of buying locally grown fruits?
5. What are the Dietary Guidelines?



UNIT 2
FOOD UNDER OUR FEET: POTATOES & ONIONS

KEY POINTS

In this unit you will learn to:

- Make potato soup and clam chowder.
- Chop vegetables.
- Store potatoes and onions properly.
- Cut down on fat and salt.
- Appreciate the nutritional qualities of potatoes.

INTRODUCTION

Some plants such as potatoes, onions, garlic, carrots, and radishes have fleshy parts which grow underground.

The first potatoes were grown in South America. The potatoes ranged in size from a nut to an apple and were many different colors, including gold, red, gray, blue, and black.

Originally, the Europeans thought the potato was unfit for human consumption because it wasn't mentioned in the Bible. French doctors claimed it caused serious illness. It took about 200 years before potatoes were widely eaten in Europe.

A group of Irish immigrants brought potatoes to North America in the early 1700's. Potatoes now are used widely throughout the world.

Onions originated in the mountains of eastern Europe. Ancient explorers and traders spread the onion plants as they traveled. As early as 2800 B.C., onions were used in many countries around the Mediterranean Sea. Onions were brought to the Americas shortly after 1500 A.D. by Spanish conquistadors.

IN THE PACIFIC NORTHWEST

Onions and potatoes are grown in the dry, arid areas of the Pacific Northwest. These areas have a light, fine soil which is excellent for producing underground crops. An abundant supply of moisture is necessary to produce good quality onions and potatoes. This water comes from the rivers which flow through the Pacific Northwest. Snake River water is used to irrigate potatoes and onions in Idaho. The Columbia River is the primary source of irrigation water for Washington and Oregon potatoes. Almost one-half of all potatoes produced in the United States are grown in Idaho, Washington, and Oregon.

The Pacific Northwest specializes in the production of large sweet onions with a mild flavor. Walla Walla Sweets, mild-flavored onions which are delicious baked and for salads and French-fried onion rings, are grown near Walla Walla, Washington. Eastern Oregon and southwestern Idaho produce more than half of all the yellow Sweet Spanish onions used in America.

FOOD PREPARATION

Cooking with Potatoes and Onions

Thousands of recipes use either potatoes or onions and many combine the pungent flavor of onions and the mild taste of potatoes. Potato soup depends on a blend of these two vegetables for its flavor. Many other foods can be added to the basic potato soup. Our recipe has clams, another favorite food from the Pacific Northwest, as an optional ingredient. After you have made the soup, look through a cookbook and find other recipes which use both onions and potatoes.

POTATO SOUP OR CLAM CHOWDER

(Makes 4 servings)

1 cup potatoes, cut into 1/2 inch cubes
1/4 cup diced onions
1/4 cup diced celery
2 tablespoons margarine or butter
2 tablespoons flour
1/2 teaspoon salt , pepper to taste
2 cups lowfat milk
1 can chopped or diced clams (optional)
1 tablespoon red wine vinegar or cider vinegar (optional)

1. Cube potatoes, dice onions and celery into small pieces. Put in saucepan, add clam juice drained from the cans of clams (if making clam chowder), cover vegetables with water.
2. Simmer on medium heat until vegetables are tender, about ten minutes. While vegetables are cooking, prepare a white sauce in the following way:

a. Melt margarine or butter over low heat in a heavy saucepan. A wooden spoon or wire whip works well for stirring.

b. Blend in flour, salt, and pepper.

c. Cook over low heat, stir until the mixture is smooth and bubbly.

d. Remove from heat. Stir in milk.

e. Put pan back on stove, bring to boil, stirring constantly. Boil one minute.

f. Add the cooked vegetables (undrained) and vinegar to the white sauce. Add clams if making clam chowder. Stir until mixed and serve. Refrigerate leftover soup.

To adapt recipe for microwave cooking:

1. Combine chopped vegetables in microwave cooking dish. Add clam juice (if making clam chowder) and enough water to cover vegetables.
2. Microwave on high until vegetables are tender, about five minutes.

a. Place margarine or butter, flour, and salt in 1 quart glass measure. Microwave on high (100%) for two minutes; stir after one minute.

b. Gradually stir in milk. Microwave on high 3 1/2 to 4 1/2 minutes; stir every minute until sauce is thick and bubbly.

c. Add cooked vegetables (undrained) and vinegar to the white sauce. Add clams if making clam chowder. Stir until mixed and serve.

MEAL MANAGEMENT

Served with a green salad and hot muffins, potato soup is a meal which is satisfying, attractive, and inexpensive. Soups are often served as family or "everyday" type meals. However, a pot of soup is also an easy meal to prepare and serve to a crowd. Many soups can be prepared early and simmered on the stove while the rest of the meal is prepared. What if you're going to be gone all afternoon and would like to have dinner ready when you return? Put the soup fixings in a crockpot before you leave and you can return to an already-prepared meal. Or you can prepare a soup quickly in a microwave oven.

Here are the times to prepare potato soup using the different methods:

Crockpot - 5-7 hours (use recipe developed for crock pot)
Range - 30 minutes
Microwave oven - 10 minutes

Diced vegetables are cut into small pieces similar in size and shape. There are many different ways to dice vegetables. With a little practice, you can learn to prepare diced vegetables quickly with a sharp knife and a cutting board.

Some people prefer dicing vegetables in a blender or a food processor. If you have either of these pieces of equipment, try using them to dice onions.

How does using the machine compare to dicing by hand? Which way is quicker? (Don't forget to count the time it takes for you to clean and wash your equipment.) Which method do you prefer?

STORAGE AND HANDLING

Potatoes should be stored in a cool, humid (but not wet) place that is well-ventilated. If the temperature is above 50°, potatoes will begin to produce sprouts, the first step in producing new potato plants. Potatoes should be stored in a dark place, since light makes potatoes turn green and bitter. Don't store potatoes in the refrigerator because that will make the starch in the potatoes turn to sugar, causing a sweet taste in the potatoes.

Uncut onions should be stored in a cool, dry, well-ventilated area. Store chopped or cut onions in the refrigerator. Wrap the cut onion tightly in

plastic wrap or aluminum foil or put in tightly covered dish, or all the foods in the refrigerator will smell and taste like onion.

NUTRITION AND HEALTH

Many of us eat too much fat and salt in our foods. Soups are usually low in fat. Our recipe for potato soup uses milk as a liquid substitute for the high-fat cream that is sometimes used. By using onions and garlic as flavoring, less salt is needed for a good-tasting soup. In other foods, you can cut back on salt by using lemon or herbs for flavoring.

Have you ever heard that potatoes are fattening? It's not true. A medium baked potato contains only 150 calories, which is about 6% of your daily energy needs. Potatoes are a good source of many nutrients. One serving supplies 9% of the amount of protein recommended for a teenager, 20% of the vitamin A, 14% of the thiamin, and 60% of the vitamin C.

BE A WISE CONSUMER

Thousands of people in the Pacific Northwest work in potato processing plants turning potatoes into french fries, potato chips, hash browns, instant mashed potatoes, and other potato products. These processed potatoes cost more than buying whole potatoes.

Sometimes the time savings from using processed food justifies the additional cost. A wise consumer thinks about both time and money available when deciding whether processed foods are a wise buy.

IDEAS TO EXPLORE

A. French fries are a popular food in restaurants. Visit a fast-food restaurant which specializes in hamburgers and french fries. Observe twenty persons as they place their orders. How many ordered french fries? Ask the cook or manager of the restaurant how many pounds of french fries are cooked in their restaurant each day.

B. Visit a grocery store. Investigate the different forms in which potatoes are sold. Compare the prices of fresh, dried, and frozen potatoes.

C. If you live in a potato growing area, tour a potato processing plant. What forms of potatoes are produced there? Where are these potatoes sent after they are processed?

D. The average person who lives in the United States eats 125 pounds of potatoes each year. Forty percent of the potatoes sold are fresh, one-third are frozen, and 15% are potato chips. Keep track of all the potatoes you eat for one week. How many different types of potatoes did you eat? Did you eat more fresh, frozen, or chipped potatoes?

CHECK YOUR PRODUCT

Was your potato soup/clam chowder:

1. Well-seasoned, neither too bland nor too salty?
2. Cooked the proper length of time so potatoes were done, but not mushy?
3. Made with a smooth white sauce which had no lumps and was not scorched?

CHECK WHAT YOU LEARNED

1. In what areas of the Pacific Northwest are potatoes grown?
2. What are the steps in making a white sauce?
3. What is the best place in your house to store potatoes? What is the best place to store onions?
4. Do you prefer to dice vegetables with a knife or a machine? Why?
5. How can you cut down on fat and salt in foods you are cooking?

UNIT 3
A TASTY COMBINATION: LENTILS AND PORK

KEY POINTS

In this unit, you will learn:

- About lentils and pork.
- To cook lentils.
- About cured meats.
- To cook pork properly.

INTRODUCTION

This unit focuses on foods which have been used for centuries. One of the first cultivated food plants was lentils. They have been grown for more than 4,000 years. Lentils, peas, and beans are related plants called legumes. All produce seeds in long pods. The lentil seeds inside the pod are the part used as food. Lentil seeds have a distinctive flavor and are among the most nutritious legumes because they are high in protein, carbohydrates, and fiber.

Another food which has been used for a long time is pork, the meat from hogs. Humans began taming hogs about 8,000 years ago. Explorers and colonists from Spain and England brought hogs to North and South America in the early 1500's. Meat from hogs includes pork chops, spareribs, pork roasts, ham, bacon, and sausage.

Some religions, such as Islam and Judaism, forbid their followers to eat hog meat because they regard hogs as unclean.

IN THE PACIFIC NORTHWEST

The Palouse Hills of eastern Washington and northern Idaho have just the right climate to grow lentils and their cousins, dry peas. Ninety-five percent of the total U.S. production of dry peas and 100% of the total U.S. production of lentils are grown in the Palouse area.

Lentils have been used for many years by people of other nations as a meat alternative. Much of our lentil harvest is shipped to other countries. In recent years, we have begun to discover new ways in which lentils can be used and their popularity has grown.

Many recipes with dry peas and lentils also use pork. The midwestern part of America produces most of the pork supply used in the U.S. However, some farms in the Pacific Northwest specialize in production of hogs, and many farmers raise a few pigs along with other livestock and crops.

FOOD PREPARATION

Most legumes such as dried beans need to be soaked before they are cooked. Lentils and split peas do not need to be soaked and also cook much more quickly than dried beans.

Polish Lentils is a tasty dish which combines the mild flavor of lentils with a spicy Polish sausage. You can substitute other kinds of sausage or bake the seasoned lentils without sausage. Garlic, curry, and chilies are other seasonings frequently used to flavor lentils.

POLISH LENTILS (Makes 6 servings)

1 cup lentils
2 cups water
1 teaspoon salt
1 one-pound can tomatoes (2 cups)
1/4 cup minced onion
1/4 cup minced green pepper
1/2 teaspoon dry mustard
1/4 teaspoon Worcestershire sauce
1/8 teaspoon thyme
1/8 teaspoon pepper
1 pound Polish sausage, cut in 1/2 inch slices (optional)

1. Combine lentils, water, and salt in saucepan.
2. Bring to boil; cover and simmer 15 minutes.
3. Add tomatoes, onion, green pepper, and seasonings to undrained lentils.

4. Turn into 1 1/2-quart casserole.
5. Arrange sausage slices on top.
6. Cover; bake at 350 degrees for 30 minutes. Remove cover and continue baking 15 minutes. Refrigerate leftovers.

To adapt recipe for microwave cooking:

1. Combine lentils, water, and salt in microwave cooking dish.
2. Microwave five minutes on high (100%).
3. Reduce power to medium (50%) and microwave an additional 25 minutes until lentils are tender.
4. Add tomatoes, onion, green pepper, and seasonings. Arrange fully cooked sausage* slices on top.
5. Cover; microwave on high (100%) for ten minutes.

This Dorothy Dean Homemaker's Service recipe is reprinted by permission of the *Spokesman Review* and *Spokane Chronicle*, Spokane, Washington.

MEAL MANAGEMENT

Many oven dishes such as Polish Lentils are easy to prepare but take some time to cook in the oven. The microwave oven can be used to speed up the final cooking of the casserole. However, the initial cooking of dried foods such as lentils, beans, and rice takes as long in the microwave as on top of the range. While the lentil casserole is cooking you can fix the rest of the meal, set the table, and wash the preparation dishes.

Lentil dishes have a soft texture and a brown color. Add some crunchy, colorful foods to contrast with the Polish Lentils.

Suggested Menu

Polish Lentils
Lettuce Wedge with vinegar-oil dressing or Raw Vegetable Relish Tray
Breadsticks
Milk

**Be sure to use a fully-cooked sausage (or pre-cook the sausage) when microwave cooking because the casserole is not heated long enough to cook the sausage. Now that you've made one dish with lentils, be creative. Try other dishes using lentils with different seasonings. Lentils can also be used to make soups, salads, chili, chocolate cake, quick breads, and a dip for tortilla chips.*

SAFETY AND STORAGE

Uncooked lentils will keep almost indefinitely if stored in a cool, dry place in a tightly-covered container. After cooking, lentils should be kept refrigerated and used within a few days.

Pork is available as fresh, cured, smoked, and canned. Pork is cured by adding salt, a sweetener, nitrites, and flavoring compounds. Ham, bologna, corned beef, bacon, and some sausages are cured. The pink color of cured meats is caused by the nitrites used in the curing process. In addition to adding color, nitrites also reduce bacteria growth and add flavor to cured meats. Some cured meats are also smoked by exposing the meat to wood smoke. Smoking adds additional flavor to meats.

Fresh (uncured) pork, like all fresh meat, should be stored in the coldest part of the refrigerator for no longer than two to three days. Cured pork can be stored longer in the refrigerator, particularly when vacuum packed in plastic wrapping.

Canned hams are pasteurized to reduce bacteria count, but are not sterilized to kill all bacteria. Unlike other canned foods which are stored at room temperature, canned hams should be refrigerated in the unopened can.

Cooking Pork

Fresh pork cuts should be cooked until the temperature of the meat is 160°F throughout and there are no pink areas in any part of the meat. A meat thermometer is the best way to test meat for doneness.

Some cured pork is fully cooked during processing. Other types of processing produce pork products which must be cooked before eating. Check the label of ham, Canadian-style bacon, and other cured pork products. If the label says "fully-cooked," the meat does not need further cooking, however, it may be warmed before serving. If the label says "cook before eating," heat the meat to at least 160°F.

What if the label does not say whether the cured pork is fully-cooked or to cook before eating? Cook the meat to 160°F.

Pork needs to be cooked to a higher temperature than beef. This is because some pork meat may contain a parasite which can infect humans and cause a disease called trichinosis. The parasite is killed if pork is heated to 160°F.

Pork may be safely cooked in a microwave oven by cooking it to 160°F in a closed container such as a cooking bag or a covered microwave-safe container on a medium or medium-low power setting.

NUTRITION AND HEALTH

Lentils and other legumes are richer in protein than any other plant foods. Because of this, they are grouped in the high protein food group along with meats, fish, poultry, and eggs. Although legumes are high in protein, they do not have as much fat as other foods in the high protein food group.

Polish Lentils is an extremely nutritious dish. Each food used in the recipe provides many nutrients and there are only 158 calories per serving. Only 20% of the calories come from fat. (When meat is used as the main source of protein, more than 40% of the calories are from fat.)

POLISH LENTILS

% of Recommended Nutrient Intake Per Serving

	Teenage girl	Teenage boy
Calories	7%	6%
Protein	22%	18%
Calcium	4%	4%
Iron	17%	17%
Vitamin A	13%	11%
Thiamin	13%	10%
Riboflavin	10%	8%
Ascorbic Acid	33%	33%

One way to evaluate nutrient density of a food is to compare the concentration of nutrients with the amount of calories in the food. If a food has at least four nutrients which are in higher concentration (compared to recommended intake) than the amount of calories, it has an extremely high nutrient density. Polish Lentils has six out of seven nutrients in greater concentration than calories. Drink milk (for calcium) with Polish Lentils and you'll be well-supplied with all major nutrients.

One way to reduce fat in meals is to substitute legumes for meats as a main dish. Fat can also be reduced by eating low-fat animal foods. Although we may think of pork as being very fat, new breeding and feeding practices have resulted in lean pigs whose meat contains more protein and less fat than pork of twenty years ago or longer. Trim away all surface fat before cooking to decrease calories from fat even further.

IDEAS TO EXPLORE

Take a trip to the grocery store. Look at the variety of ways pork is sold as fresh cuts and cured meat (bologna, sausage, ham, bacon). Check the label of cured meats to see if they contain pork or other meats. Look for expiration dates on the packages of cured meat. Does vacuum-packed cured meat have a shelf life of days, weeks, or months?

Learn more about the use of pork around the world by reading about it in an encyclopedia and by looking at recipes from other countries. What parts of the world commonly use pork? What countries use very little pork because of religious beliefs which prohibit eating pork?

The Africans who were brought to the United States as slaves developed a distinctive food pattern that is sometimes called "soul food." Investigate the use of pork in soul food dishes.

Look through cookbooks to learn about other ways to fix lentils. If you find a lentil recipe for a dish commonly prepared in another country, prepare it for your family or your 4-H club.

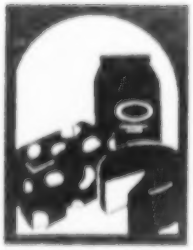
CHECK YOUR PRODUCT

Was the Polish Lentils casserole:

1. Cooked until soft but not mushy?
2. Well-seasoned with a pleasing blend of flavors?
3. Moist, but did not have too much liquid?

CHECK WHAT YOU LEARNED

1. How are peas, beans, and lentils alike?
2. Which legumes do not need to be soaked before cooking?
3. What are two ways to tell when pork is thoroughly cooked?
4. Why is Polish Lentils a nutritious dish?



UNIT 4
SAY CHEESE, PLEASE

KEY POINTS

In this unit, you will learn:

- How cheese is made.
- To cook with cheese.
- How to store cheese.
- The nutritional value of dairy foods.
- To recognize different kinds of cheese.

INTRODUCTION

People throughout the world use cheese. According to legend, cheese was first made thousands of years ago by a traveler who placed milk for the journey into a pouch made of a sheep's stomach. As he traveled, the sun's heat and the enzymes in the lining of the stomach pouch changed the milk into curds and whey.

The first step necessary to make cheese is to form a curd from the milk proteins, leaving a thin liquid which is whey. The curd is formed by action of an enzyme (usually rennin) and an acid. The milk the ancient traveler carried formed a curd because acid was produced by bacteria in the milk and the sheep's stomach contained rennin.

Since that accidental discovery of cheese-making, methods have been developed to produce countless varieties of cheese that range in texture from soft to hard and in flavor from mild to sharp.

IN THE PACIFIC NORTHWEST

Almost one-third of the milk produced in the Pacific Northwest is manufactured into cheese. The rest of the milk is used for drinking as fluid milk or made into ice cream, butter, cottage cheese, yogurt, or powdered milk.

It takes about 150,000 dairy cows to produce the amount of milk required for the 200 million pounds of cheese which are produced each year in the Pacific Northwest.

The Pacific Northwest has been enriched by the wide diversity of peoples who have settled here. The cheese dishes we eat come from all over the world. Pizza originated in Italy and fondue originated in Switzerland. Many foods which originated in Mexico use cheese, including tacos, enchiladas, and burritos.

FOOD PREPARATION

Cheese needs to be cooked at low temperatures for a short time. Excessive heat or long cooking causes the cheese to form strings and become tough.

Cheese melts quickly in a microwave oven and can be overcooked easily. When using a microwave oven, add cheese to foods toward the end of the cooking period or place it under other foods in a casserole.

In this lesson, you will learn to make enchiladas. A tasty sauce is the secret to making great enchiladas. You can add a variety of fillings to the basic cheese enchilada. Roast beef or pork, cooked ground beef, and refried beans are frequently used in enchiladas. Fillings should be moist but not runny.

CHEESE ENCHILADAS (Makes 6 servings/ 2 enchiladas/serving)

4 cups tomato juice
2-3 teaspoons chili powder
1 teaspoon garlic salt, or 1 garlic clove, diced
1/4 teaspoon ground cumin (optional)
2 tablespoons cornstarch
1/4 cup cold water
2 cups shredded Monterey Jack or Cheddar cheese, divided
8 green onions, chopped
1 4-ounce can diced green chilies
1 dozen 8" flour tortillas

A. Prepare sauce:

1. Mix tomato juice, chili powder, garlic, and cumin in saucepan. Bring to boil.
2. Mix cornstarch with cold water. Stir into tomato mixture. Stir constantly until boiling. Reduce heat and boil one minute.

B. Prepare filling:

1. Grate cheese, chop green onions.
2. Mix together 1 cup grated cheese, chopped green onions and diced green chilies. Meat and/or refried beans may also be added to the filling.

C. Heat tortillas to soften:

1. Preheat oven to 325°F. Wrap tortillas in cloth towel.
2. Heat in oven for five minutes.

D. Assemble enchiladas:

1. Dip heated tortilla into hot sauce. (A cake pan slightly larger than the tortilla is ideal for holding sauce for dipping.)
2. After tortilla is dipped in sauce, lay it on a large plate. Spoon two tablespoons filling onto center of tortilla. Turn part of tortilla over filling, roll it, and place seam down in a 9" x 13" baking pan.
3. Top rolled enchiladas with additional sauce, adding enough to make a shallow layer of sauce in the bottom of the pan so that tortillas are moistened well and do not dry out while baking.
4. Sprinkle tops of enchiladas with one cup grated cheese. Bake enchiladas uncovered in a 350°F oven for 20 minutes until just heated thoroughly. Serve promptly. Refrigerate leftovers.

To adapt recipe for microwave cooking:

A. Prepare sauce:

1. Mix tomato juice, chili powder, garlic, and cumin in two quart glass measure.
2. Mix cornstarch in cold water. Stir into tomato mixture.
3. Microwave for four minutes at high (100%), stir. Continue microwave cooking on high until mixture boils, 1-3 minutes.

B. Prepare filling as directed in conventional recipe.

C. Heat tortillas to soften:

1. Wrap tortillas in a clean, damp dish towel.
2. Microwave on high for one minute.

D. Assemble enchiladas :

1. Place in a glass baking dish as directed in conventional recipe, except do not put cheese on top.

E. Bake enchiladas:

1. Microwave on high (100%) for 11-13 minutes until tortillas are heated.
2. Sprinkle tops of enchiladas with 1 cup grated cheese.
3. Microwave on high 1-2 minutes until cheese is soft and almost melted.

MEAL MANAGEMENT

If you have cheese in the refrigerator, you can probably create a nutritious and tasty meal. Cheese is often combined with a starchy food such as bread, potatoes, pasta, rice, or tortillas. Add crisp vegetables or fresh fruits to the cheese-based main dish to make a nutritious, attractive meal with a variety of textures, tastes, and colors.

Cheese enchiladas are spicy. Choose some milder flavored foods for the rest of the meal.

Suggested menu:

Cheese Enchiladas
Refried Beans
Tossed Salad
Milk

SAFETY AND STORAGE

Cheese should be wrapped tightly and stored in the refrigerator. Proper packaging of cheese helps keep in moisture and slows mold growth. The original cheese wrapper, plastic wrap, and aluminum foil work well to wrap cheese.

Hard cheeses such as cheddar, Swiss, or parmesan may be kept for several weeks. Cottage cheese is highly perishable and should be used a few days after purchase. Other soft cheeses such as cream, Brie, and Camembert will keep for several weeks. Most hard cheeses (such as cheddar, Swiss and mozzarella) can be successfully frozen. Cut the cheese into pieces which weigh less than one pound and are not more than one inch thick, wrap tightly in freezer foil or other freezer wrap, and freeze quickly. Thaw in the refrigerator in the original wrapping and use as soon as possible after thawing. You may see some change in texture.

Mold may develop on cheese. Although most molds are harmless, some may produce toxins which spread into the cheese. For hard cheeses, cut away 1/2 inch of cheese below the moldy portion and discard. Moldy soft cheeses such as cottage cheese or cream cheese should not be eaten.

NUTRITION AND HEALTH

Dairy foods provide about 75% of the calcium, 35% of the riboflavin, and 20% of the protein in our diet. Do you regularly include milk, cheese, and yogurt in the foods you eat? If you don't, you will probably have a low intake of calcium and riboflavin.

Cheese is a concentrated source of many of the nutrients in milk. However, cheese is also quite high in fat and sodium, nutrients which are often too high in our food pattern. Low-fat and skim milk and yogurt provide calcium, riboflavin, and protein but are low in fat.

Most fried foods have a low nutrient density because fat adds many calories, with few, if any nutrients. Frying in hot fat is the traditional way to heat and soften tortillas. The cheese enchilada recipe was modified to reduce fat by heating the tortillas in the oven so they are softened without adding fat.

BE A WISE CONSUMER

At the grocery store, you may see products labeled as natural cheese, process cheese, and process cheese food. Do you know the difference?

Natural cheese is the solid portion of milk (curds) separated from the liquid (whey). After the cheese is manufactured, it is stored or cured, a process which develops flavor and changes texture. Aged cheese is more expensive due to the expense of maintaining the storage facility during the aging process. Mild cheese is cured two or three months. It has a mild flavor and a soft, open texture. Medium aged cheese is cured up to six months. The flavor is mellow and slightly nutty and the texture is smooth. Sharp or aged cheese is cured over six months. It has a rich, sharp, nutty flavor and a slightly crumbly texture.

Pasteurized process cheese is a blend of fresh and aged natural cheeses which have been shredded, mixed, and pasteurized.

Pasteurized process cheese food is prepared in the same way as process cheese, but it has nonfat dry milk, whey, or other dairy products added. It is lower in fat and higher in moisture than process cheese.

Pasteurized process cheese spread is similar to process cheese food, but it has ingredients added so that it will spread easily.

Some types of cheese are more suitable for use in cheese sauces and for melting. Process cheeses melt easily and are not likely to curdle in sauces because they contain emulsifiers which keep the fat from separating from the rest of the cheese.

IDEAS TO EXPLORE

Walk through the cheese display of a grocery store. How many different kinds of cheese do you see?

A. Compare the price of sliced and unsliced cheese of the same type. How much more does sliced cheese cost? Are there situations when using sliced cheese is worth the extra cost?

B. Look on labels to find where different cheeses are made. How many come from other countries? Are any of the cheeses made near your home?

Compare the taste and texture of mild, medium, and sharp cheddar cheese. Taste several types of cheese you have never eaten.

Is there a food bank or similar place where people in your community get free food? If you do not know, call the Chamber of Commerce or city or county government offices to find out. Cheese is frequently given out at food banks because it is a high-protein food which can be stored for a long period. What other kinds of high-protein foods are given out at the food bank? Volunteer to work at the local food bank in order to serve your community.

CHECK YOUR PRODUCT

Were the cheese enchiladas:

1. Soft and moist, but not mushy?
2. Well-seasoned with a pleasing blend of flavors?
3. Attractively wrapped and garnished?

CHECK WHAT YOU LEARNED

1. What makes cooked cheese tough and stringy? How can you prevent this from happening?
2. How long can hard cheese be kept in the refrigerator? Can cottage cheese be stored for as long a period?
3. What should you do with moldy cheese?
4. If you do not eat milk, cheese, or other dairy products, what nutrients are most likely low in your diet?

UNIT 5
POULTRY: FOOD WITH WINGS

KEY POINTS

In this unit you will learn to:

- Prepare and serve poultry safely.
- Use leftover pieces of chicken.
- Prepare chicken dishes low in fat.
- Be a wise consumer of chicken.

INTRODUCTION

The early morning crowing of roosters has served the farmer as an alarm clock for thousands of years. The only problem with using the rooster as an alarm clock is that he crows at the first light of dawn and he doesn't know that on Saturday morning you don't want to wake up early.

Humans began taming and raising Asian jungle birds 3,000 to 5,000 years ago and gradually developed the domesticated chicken. It is not known when the large American bird we call the turkey was first tamed, but the domestication was done in Mexico by Native Americans. The Spaniards brought tame turkeys from Mexico to Europe in 1524 and the Pilgrims brought several tame turkeys to America in 1620. At the potluck dinner that was shared by the Pilgrims and Native Americans, the turkey may have been a wild one the Native Americans brought to the feast or one of the domesticated ones that Pilgrims brought from England!

IN THE PACIFIC NORTHWEST

Most U.S. poultry is produced in the southern states because housing, feed, and labor costs are lower. However, many persons in the Pacific Northwest are willing to pay a little more for poultry grown in this region because the locally produced poultry is usually delivered to the grocery store within 24 hours after it is processed.

FOOD PREPARATION

HERBED CHICKEN BITES (*Makes 5-6 appetizer servings*)

Breast and thigh meat from one fryer
1/2 cup fine cracker crumbs
1/4 cup grated parmesan cheese
1/2 teaspoon dried thyme, crushed
1/2 teaspoon dried basil, crushed
dash ground pepper
1/4 cup butter or margarine, melted

1. Skin and bone chicken meat, using a sharp knife and a plastic cutting board.
   a. To remove bone from breast meat, place chicken breast skin side up on cutting board. Remove skin. Working on one side of the breast, insert the tip of a sharp knife between the bony area and the meat. Gently separate the meat from the bone on one side of the center breastbone. Repeat on the other side of the breastbone. Then detach the breast from the breastbone.
   b. To remove bone from thigh meat, slit skin and pull off, using your fingers and a knife. Make one cut through meat to the bone from one end of thigh bone to the other end. Insert tip of sharp knife into the cut and gradually work around the bone separating the meat away from the bone.
2. Cut meat into bite-sized pieces.
3. Combine cracker crumbs, cheese, and seasonings in a medium bowl.
4. Dip chicken pieces in melted butter or margarine, then roll them in cracker mixture.
5. Arrange chicken bites in a single layer on an ungreased baking sheet.
6. Bake at 400°F until golden brown and fork-tender, about 20 to 25 minutes.

To adapt recipe for microwave cooking:

1. Prepare chicken as directed in conventional recipe for Steps 1-4.
2. Put chicken pieces in glass pie pan. Cover with waxed paper.
3. Microwave on high (100%) for five minutes. Rearrange chicken pieces so that ones in center are on the outside of the pie pan. (This will help to cook all pieces evenly.)
4. Cook an additional 4 to 6 minutes on high until no pink appears in the centers of pieces.

Recipe furnished compliments of Washington Fryer Commission.

MEAL MANAGEMENT

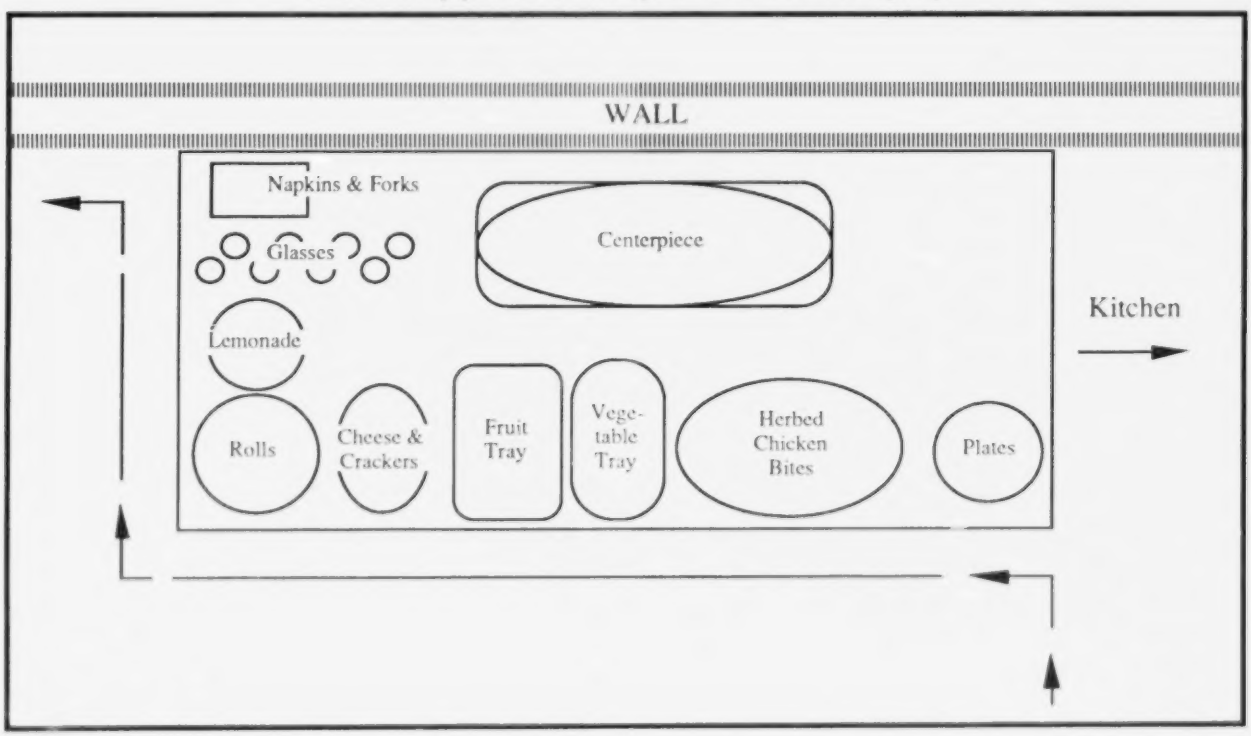
Herbed Chicken Bites can be used as a main dish for a meal or as an appetizer for a buffet table. If you plan a party where people will be standing up to eat, prepare a variety of foods which are finger foods or can be eaten with a toothpick or a small fork.

Suggested Buffet Table Menu

Herbed Chicken Bites
Tray of fresh vegetables including carrot sticks, celery sticks, radishes, zucchini strips, cucumber circles with herb-flavored yogurt dip
Tray of fresh fruits, sliced into bite-sized pieces
Cheese and crackers
Rolls
Lemonade

In buffet service, the food is arranged on a table so that guests can help themselves. Buffet service is flexible and can be used to serve a few friends or a large group. Guests move about during the meal service which may help to develop a friendly atmosphere. However, if too many guests are served from one table, the line may become long. If you are planning to use buffet service, sketch out a plan for the buffet table, including where foods will be placed. Leave space for guests to pass along one or both sides of the table. If electrical appliances are used on the buffet table, be sure cords are placed where no one can trip over them.

Here is a way you could set up a buffet table for a party:



SAFETY AND STORAGE

Raw poultry and red meats may contain bacteria such as salmonella which cause food poisoning. These bacteria are killed when the meat is thoroughly cooked, so we can eat the cooked foods without worry of them making us sick. We do need to be very careful in handling raw poultry and meat so that the bacteria are not transferred to other foods which will not be cooked. The following food handling rules help prevent transfer of food poisoning bacteria from poultry and raw meats to other foods:

Store poultry and raw meat on a tray or pan in the refrigerator to prevent meat liquids from dripping onto other foods.

Wash utensils, containers, and countertops in hot, soapy water after they come in contact with poultry or raw meat.

Sanitize cutting boards used with poultry or raw meat to kill bacteria. Hard plastic cutting boards are recommended for use with raw meat and poultry because they can be sanitized by washing in a dishwasher. Cutting boards which are not washed in a dishwasher should be sanitized after each use with raw meat or poultry by pouring a mixture of 2 teaspoons chlorine bleach and 4 cups lukewarm water over the scrubbed board. Let the solution stay on board 5 minutes, then wash with hot, soapy water, rinse, and air dry.

After handling poultry or raw meat, *wash hands in hot, soapy water* before touching other foods or food surfaces.

Cook poultry until the juices run clear when the flesh is pricked with a fork, or to 180 degrees F on a meat thermometer.

Put cooked poultry and meat onto a clean plate. (Have you ever been to a barbeque where the platter which was used for the raw chicken was also used for the cooked meat?)

Don't leave foods such as poultry or meats at room temperature for more than two hours. If you are serving the Herbed Chicken Bites as a party snack and the party will last longer than two hours, you could keep the Herbed Chicken Bites warm in a crockpot or on a hot tray or you could put out a small amount of Chicken Bites at a time and when the serving tray is empty, replenish it with hot Chicken Bites.

NUTRITION AND HEALTH

A healthy lifestyle is like a jigsaw puzzle. Each of the pieces is important for good health. A nutritious diet, regular exercise, and adequate sleep each day are important parts of the puzzle. This week, work toward the goal of incorporating daily exercise into your lifestyle. Choose an activity you like and do it on a regular basis!

A healthy diet has a limited amount of fat because fatty foods are high in calories and have a low-nutrient density. Chicken and turkey dishes which have been roasted, broiled, simmered, or stewed are low in fat.

If you eat at a fast-food restaurant, should you choose chicken over other meats if you want a low-fat meal? Probably not. Many restaurants deep-fry chicken, making the chicken dishes as high in fat as a cheeseburger. The Herbed Chicken Bites have some added fat but contain 1/3 less fat than deep-fried chicken nuggets. Reducing the fat content also reduces the calorie value of foods. Herbed Chicken Bites have 221 calories per serving; deep-fried chicken nuggets have 323 calories per serving.

BE A WISE CONSUMER

When you fix a recipe such as Herbed Chicken Bites, the breast and thighs are the only pieces of chicken which are meaty enough to yield bite-size nuggets of meat. You can buy a package of chicken breasts or chicken thighs for the dish. You can also buy a whole chicken and use the remaining pieces for a second meal such as oven-baked chicken, chicken noodle soup, or chicken salad.

A whole chicken is 69% meat and 31% bone, chicken breast is 83% meat and 17% bone, and chicken thighs are 77% meat and 23% bone. To figure out which is the most economical way to purchase chicken, you can divide the price per pound of chicken (as purchased) by the proportion of meat the pieces contain.

Here's an example of how to work this out: If whole chicken is 99¢ per pound, chicken breasts are $1.89 per pound and chicken thighs are $1.55 per pound, which is the best way to buy chicken for Herbed Chicken Bites?

99¢/pound whole chicken = $1.43/pound of chicken meat when whole chicken is purchased
.69 (proportion of meat to bone)

$1.89/pound chicken breast = $2.28/pound of chicken meat when chicken breast is purchased
.83 (proportion of meat to bone)

$1.55/pound chicken thigh = $2.01/pound of chicken meat when chicken thigh is purchased
.77 (proportion of meat to bone)

In this example, the best buy per pound of meat is the whole chicken. However, it's only a good buy if you use all of the chicken in another meal and if you have time to cut it up.

FOOD ACTIVITY

Experiment on Effect of Cooking Method on Chicken

A. Purpose:

To observe differences in chicken baked uncovered and wrapped with aluminum foil.

B. Equipment and Materials Needed:

2 tablespoons margarine or butter
2 chicken drumsticks
1 piece of aluminum foil
2 small baking pans

C. Procedure

1. Melt margarine or butter. Brush on chicken pieces. Sprinkle lightly with pepper.
2. Wrap one drumstick in aluminum foil. Place in a baking pan. Place the other drumstick uncovered in the other baking pan.
3. Bake chicken at 400°F for 30-40 minutes until the chicken is fork tender and juice runs clear when chicken is pricked with a fork. Baste uncovered drumstick occasionally with the liquid cooking out of the meat.
4. Observe appearance and juiciness of the 2 drumsticks. Taste samples of each for tenderness and flavor. Which method of cooking produced:
   a) the brownest chicken?
   b) the juiciest chicken?

Which method do you prefer? Ask others in your family or club about their preferences.

Explanation: The aluminum foil traps the juices so that they cannot evaporate. Thus, the chicken cooked in aluminum foil is moister than the chicken baked without a cover. The golden brown color on the surface of the uncovered chicken results from a chemical reaction which occurs when the dry chicken surface is exposed to heat. A similar chemical reaction occurs when bread is toasted.

IDEAS TO EXPLORE:

Chicken is used in many countries. Look in an international cookbook to find a variety of recipes for cooking chicken. Try some of these recipes.

Take a trip to the grocery store.

A. Look at packages of fresh chicken to see where it was produced. Which is more expensive, chicken produced in the Pacific Northwest or chicken from another part of the country?

B. Look in the frozen food section. How many different types of chicken entrees do you see?

Learn to cut up a whole chicken. Find someone who knows how and ask how to do it. Practice on several chickens. Cook and serve to your family, trying out several recipes for cooking chicken.

Use the exercise record at the end of this unit to keep track of your activities for three to five days. How much time do you spend in quiet activities? In light/moderate activities? In active and very active activities? Should you decrease the time spent in quiet and light/moderate and increase time you spend in active and very active activities? Bring your exercise record to your next 4-H meeting to share your findings with other club members.

CHECK YOUR PRODUCT

Were the Herbed Chicken Bites:

1. Tastily seasoned?
2. Cooked to proper doneness?
3. Moist and flavorful?
4. Golden brown on outside?
5. Even-sized pieces?

CHECK WHAT YOU LEARNED

1. How should cutting boards used for raw poultry or meat be sanitized to kill bacteria?
2. How can you tell when poultry is thoroughly done?
3. How can you use leftover pieces of raw chicken when you prepare a recipe which does not use all parts of the chicken?
4. What ways of fixing chicken increase the fat content? What ways do not?
5. Is whole chicken always most economical to buy?

EXERCISE RECORD

Date:

Activity	Check One: Quiet	Light to Moderate	Active	Very Active	Time Spent

ACTIVITY LEVELS

Quiet:	Light to Moderate:	Active:	Very Active:
reading	walking	washing and waxing the car	walking, bicycling, or swimming fast
sleeping	shooting baskets (no running)	bowling	calisthenics
sitting around	housework	bicycling	climbing stairs
listening to the radio/stereo	slow dancing	fast dancing	playing basketball (running)
watching television	ping pong	swimming	running, jogging
driving or riding in a car	light gardening	roller skating	skiing
	volleyball	tennis	jumping rope

UNIT 6
WHEAT: THE WORLD'S MOST IMPORTANT GRAIN

KEY POINTS

In this unit, you will learn:

- About the history of wheat .
- To make yeast bread and quick breads.
- To prepare bulgur.
- To store whole wheat and refined flour properly.
- About wheat foods which promote good health.

INTRODUCTION

Have you eaten a slice of bread, pancakes, pasta, a flour tortilla, a cookie, or a piece of cake today? If so, you've joined hundreds of millions of people throughout the world who use wheat as one of the staple foods of their diet. Though no one is certain when wheat was first used as a food, archaeologists have found kernels of wheat in the ruins of an ancient village believed to be about 6700 years old. Ruins of other ancient civilizations contain tools for grinding wheat and bread-baking ovens.

IN THE PACIFIC NORTHWEST

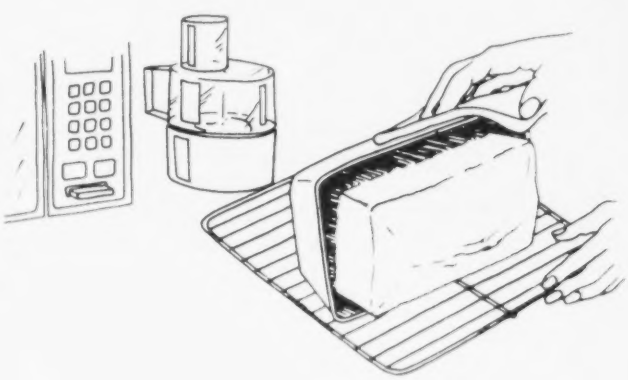
The song, "America the Beautiful," tells of amber waves of grain. In the wheat-growing areas of the Pacific Northwest, the rippling fields of wheat stretch for miles like a golden ocean. At harvest, giant combines move through these fields cutting the grain and thrashing it to remove the wheat seed from the rest of the wheat plant.

Wheats come in several varieties. Winter wheats are planted in the fall. They become dormant in the winter, begin to grow again in early spring, and are harvested in the early summer. Spring wheats are planted in the early spring and harvested in the late summer. Some varieties of wheat have a low protein content and are used for cake flour and making flatbreads and Asian noodles. Other wheat varieties are high in protein and are used for bread flour. Low and high protein wheats are blended to make all-purpose flour.

The Pacific Northwest specializes in the production of winter wheat which is low in protein. Much of the wheat grown in this area is shipped to Asian countries to be made into steamed breads, Asian noodles, and flat breads. This wheat travels by barge down the Snake and Columbia Rivers to Portland or by truck to ports such as Seattle. There it is loaded on ocean liners for its journey across the Pacific Ocean.

FOOD PREPARATION

Wheat flour is an essential ingredient in high quality yeast breads because gluten formation is necessary for the bread to rise properly. The proteins in wheat flour are glutenin and gliadin. When these proteins mix with liquid and are stirred, they interact and gluten is formed. Quick breads are lightly stirred because small amounts of gluten make a high-quality product. Yeast breads require much more gluten, so are kneaded to develop gluten.



QUICK WHEAT BREAD (Makes 1 loaf)

2 cups all-purpose flour
1 3/4 cups whole wheat flour
1 package active dry yeast (1 tablespoon)
1 1/4 cups warm water
2 tablespoons honey
2 tablespoons nonfat dry milk
1 tablespoon vegetable oil
1 1/2 teaspoons salt

1. Mix together in a gallon size heavy plastic food bag:
   1/2 cup all purpose flour
   1 package yeast (1 Tbsp)
   1/2 cup warm water
   1 tablespoon honey
2. Blend with fingers until well mixed. Let rest 15 minutes. Mixture should be bubbly.
3. Add to the ingredients in the bag:
   3/4 cup warm water
   1 tablespoon honey
   2 tablespoons dry milk
   1 tablespoon oil
   1 1/2 teaspoon salt
4. Mix well with fingers, then add:
   1 3/4 cups whole wheat flour
5. Gradually add: one cup all purpose flour
6. Work dough in the bag until flour is well blended. If the dough is sticky and won't pull away from the bag, add a little more flour (about 1/8 cup). Be cautious. If you add too much flour, the dough will be stiff.
7. Turn dough out (turn bag wrong side out) on a lightly floured surface. Knead dough until it is smooth and satiny, about ten minutes. To knead, first form the dough into a round ball, then fold the dough toward you. Using the heels of your hands, push dough away with a rolling motion. Give the dough a quarter turn, then fold it over and push dough away again. Continue kneading until dough is smooth and elastic. You cannot over-knead the dough. The dough should feel light and spongy. If it is sticky, continue kneading and add a little more flour.
8. Cover dough with plastic bag and let rest ten minutes.
9. After the resting period, shape the dough. Place dough in pan, cover, and let rise until double in size (about 30-40 minutes).
10. Preheat oven to 400°. Bake loaf approximately 20-30 minutes, until done. Test bread for doneness by tapping the top with your finger. A hollow sound means that the loaf is properly baked.
11. Remove bread from pan; cool it on wire rack. When it is completely cooled, place in plastic bag. The plastic bag is a convenient way to make yeast bread in a 4-H group. When you make this recipe at home, use a large bowl rather than a plastic bag.

This quick bread recipe uses two specialty crops raised in the Northwest - cranberries and walnuts. If cranberries are not in season, use a quick bread recipe which uses another fruit or vegetable.

CRANBERRY-WALNUT BREAD

1 cup fresh or frozen cranberries
1/2 cup walnuts
1 egg
2 tablespoons oil
3/4 cup orange juice
2 cups all-purpose flour
3/4 cup sugar
1 1/2 teaspoons baking powder
1 teaspoon salt
1/2 teaspoon baking soda

1. Lightly grease an 8" x 4" x 2" loaf pan or three 6" x 3" x 2" loaf pans. Preheat oven to 350°F.
2. Coarsely chop cranberries and walnuts. Set aside.
3. Beat egg in small bowl. Add oil and orange juice.
4. Stir together flour, sugar, baking powder, salt, and soda in large bowl.
5. Add orange juice mixture; stir just until moistened.
6. Gently stir in chopped cranberries and walnuts. Turn into prepared pans.
7. Bake at 350°F, 50 to 60 minutes for large pan or 30-40 minutes for small pans. The bread is done when a wooden pick inserted in the center comes out clean.
8. Place pan on wire rack. Cool bread in pan for 10 minutes. Turn out bread on its side. Remove pan; turn loaf right-side-up. When cool, put in plastic bag.

Bulgur wheat is a very old way of processing and storing wheat. The process was used in the Middle East over 2,000 years ago. Bulgur is produced by soaking and cooking the whole wheat kernel, drying it, removing a small portion of the outer layer of the kernel, and then cracking the remaining kernel into small pieces.

Bulgur is convenient since it can be either soaked or cooked to make it ready to eat. It can be used in place of rice in any recipe. Tabbouli, which is made with bulgur, is a popular dish in Middle Eastern countries .

TABBOULI (Makes 6 servings)

1 cup uncooked bulgur

2 cups boiling water
2 tomatoes, finely diced
1 bunch (5-7) green onions with tops, finely chopped
1 cup fresh parsley, finely chopped or snipped with kitchen scissors
2 teaspoons chopped fresh mint or dry mint flakes (optional)
1/4 cup vegetable or olive oil
1/4 cup lemon juice
1/2 teaspoon salt
1/4 teaspoon cumin (optional)
pepper, to taste

1. Place bulgur in mixing bowl. Pour boiling water over it. Allow to stand 1 hour.
2. Drain well in colander, then squeeze out as much moisture as possible.
3. Return bulgur to bowl. Add remaining ingredients and mix well. Chill. (For a mild flavor, do not add mint or cumin.)
4. Serve on a bed of lettuce. Refrigerate leftovers.

MEAL MANAGEMENT

Tabbouli is a popular dish in Middle Eastern countries. It is easy to fix, goes with a variety of foods, and can be made ahead of time. Pita or pocket breads also originated in the Middle East. You can fix tabbouli and prepare a tasty meat filling to stuff in pita bread for a simple meal based on Middle East foods.

Suggested Menu:
Tabbouli
Pita bread with meat and vegetable filling
Fruit salad
Milk

SAFETY AND STORAGE

The quality of whole wheat flour is best when it is freshly ground because the fat in the wheat germ portion of the ground wheat can develop rancid flavors and odors. If whole wheat flour will be stored longer than one month, it should be stored in the refrigerator or freezer to slow down the rate of change in the fat. White flour does not contain the wheat germ fraction and can be stored at room temperature for a year without a major change in flavor.

NUTRITION AND HEALTH

Physical activity was a necessary part of every person's life before we developed machines to do our work for us. Now we depend on machines to transport us so that we do not have to walk every place we go. However, our bodies need physical activity and walking is an excellent type of physical activity which is suitable for persons of all ages. How many miles do you walk each week? For the next week, try to walk at least 7 miles—that's only one mile a day. It should take you about 12-15 minutes to walk one mile. After you have spent several weeks walking one mile each day, increase to 1 1/2 or 2 miles per day. Endurance is built by regular physical activity.

Long ago when machines to make white flour from wheat were very primitive, whole wheat bread was the peasants' food and eating white bread was a sign of wealth. Now white bread made from refined flour is usually less expensive than whole wheat breads. However, whole wheat breads have increased in popularity because they are tasty and have a higher content of dietary fiber and certain vitamins and minerals than breads made with white flour.

Of all wheat foods, cakes, pies, pastries, and cookies have the most sugar and fat. The sugar and fat give these foods that rich, satisfying taste we associate with desserts. Sugar and fat also add many calories to a food, but do not provide nutrients. Learn to prepare and enjoy eating desserts which are low in sugar and fat. Eat high-sugar, high-fat desserts sparingly.

FOOD ACTIVITIES

Tour the bread section of a supermarket. How many varieties of bread are made with:

a) 100% enriched refined flour?
b) A mix of enriched and whole wheat flours?
c) A mix of enriched flour and non-wheat flour such as oat, rye, corn?
d) 100% whole wheat flour?

Trace the route of wheat raised in your state. Which counties produce wheat? What type of wheat is grown? Who purchases the wheat from the farmer? Who uses the wheat for food? How is the wheat transported from the farmer to the person who eats it?

Three percent of the U.S. work force are farmers who produce crops and livestock. Another 20% of the work force is employed in the manufacturing, processing, transporting and retailing industries associated with food production and consumption. Work with other members of your 4-H club to make a list of all the types of jobs in your county which are related to the food industry. Share your list with 4-H members in another part of your state. Notice any differences between occupations in your county and the other county.

Make a loaf of bread and take it to share with a shut-in, an elderly person, or someone special. Be sure to stay long enough to visit.

CHECK YOUR PRODUCT

Does your Quick Wheat Bread have:

1. Golden brown exterior with a lighter brown interior?
2. Uniform texture with no large holes?
3. Tender crust and moist crumb?
4. Pleasing taste with nutty flavor of grain dominating?

Does your Cranberry-Walnut Bread have:

1. Symmetrical shape?
2. No deep cracks in surface?
3. Thin, tender crust?
4. Uniform interior texture with no tunnels?
5. A pleasing flavor, distinctive of cranberries and walnuts?

Is your tabbouli:

1. Moist, soft, but with distinctive texture?
2. A pleasing blend of flavors?

CHECK WHAT YOU LEARNED

1. Why are yeast breads kneaded and quick breads lightly stirred?
2. How can you tell when a yeast bread is doubled-in-bulk?
3. How do you test a loaf of yeast bread for doneness? How do you test quick breads for doneness?
4. Why does whole wheat flour need to be kept refrigerated or frozen for long-term storage?

UNIT 7
LOCALLY PRODUCED VEGETABLES: GARDEN CROPS AND FARMERS' MARKETS

KEY POINTS

In this unit you will learn:
- About gardening.
- To cook vegetables.
- The nutritional value of vegetables.

INTRODUCTION

In the midst of winter, what signs do you see that indicate spring is coming? For many of us, the first sign of spring is the arrival of the seed catalog. These catalogues have beautiful pictures of garden vegetables which make gardeners long for warm weather so they can begin to plant their gardens.

About 50% of households in the U.S.A. produce some vegetables and/or fruits for use by their families. Even in cities, about one-third of the households raise some garden produce.

You may wonder how someone living in the heart of the city could grow vegetables. Some people grow tomatoes in a container on their porch or on the balcony of a high-rise apartment. Others plant vegetables in a flower bed next to the house. Many participate in community gardening projects where land on vacant lots is cleared of weeds, cultivated, and fertilized and then rented for a small fee to gardeners who have no land of their own.

Gardening requires quite a bit of time and work. Although many of the same foods grown in gardens are available in the supermarket, home gardeners say they garden to save money and because they like the taste of home-grown foods.

IN THE PACIFIC NORTHWEST

In the Pacific Northwest, production of seeds for home gardeners is big business! Seeds for many popular garden vegetables such as sweet corn, green beans, lettuce, onions, and carrots are produced in the region.

How can you know what vegetables will grow well in your area? The length of the growing season and the average temperature determine whether a crop is suitable for an area.

Many areas of the Pacific Northwest specialize in producing a certain vegetable because that crop grows well in that place. The coastal areas have a long, cool growing season. Low elevation, inland areas have a long, warm growing season, while high elevation areas have a short, cool growing season.

In addition to growing your own vegetables, you may be able to buy fresh, locally produced foods at a farmers' market, a supermarket or directly from a farmer's field.

FOOD PREPARATION

Vegetables grow in or close to the ground. They need to be thoroughly washed to remove dirt, insects, and bacteria. Prepare vegetables for eating or cooking by removing the tough, fibrous parts.

Vegetables can be cooked in a variety of ways. They can be boiled, steamed, cooked in a pressure saucepan or a microwave oven, baked, broiled, or stir-fried. Vegetables can be cooked alone or with other foods, and they can be cooked whole, diced, or shredded. Many vegetables are excellent when served raw. Look in a cookbook for preferred cooking methods and times for each vegetable. Cooking times are only approximate because they vary with the size and maturity of the vegetable.

Vegetables cooked until they are tender-crisp have better color, are higher in nutrients, and have a better flavor than those cooked until soft. Test vegetables with a fork when they have been cooked the minimum time suggested. The fork should penetrate the vegetable easily but a slight resistance should be felt as it enters. Continue cooking if the fork does not easily enter the vegetable. It takes a

bit of practice to be able to judge when the vegetable is done.

Stir-frying is a technique developed in the Far East. It takes some practice to get all the foods cooked to just the right stage. Serve Vegetables & Beef Stir-Fry with rice and milk and the meal is complete.

VEGETABLES & BEEF STIR-FRY

(Makes 4 servings)

1/2 pound boneless roundsteak
1 tablespoon soy sauce
1/4 cup water
1 teaspoon cornstarch
1/2 teaspoon ground ginger or 1 teaspoon grated fresh ginger root
1 small garlic clove, minced
1 tablespoon vegetable oil
2 carrots, sliced into circles
2 small zucchini, cut in strips about 2" long and 1/4" thick
1/2 cup fresh mushrooms, sliced
1 bunch green onions, diced
1 cup fresh pea pods, if available

1. Cut beef into 2" by 1/4" strips. (It is easier to cut if the meat is slightly frozen.)
2. Make marinade of soy sauce, water, cornstarch, ginger, and garlic. Add beef. Cover and refrigerate 30 minutes.
3. While beef is marinating, prepare all vegetables for stir-frying. Other vegetables may be substituted. Total amount of vegetables should be 2-3 cups.
4. Drain meat in colander over a small bowl to save the marinade.
5. Heat oil in wok or large skillet on medium-high heat. Add beef. Cook quickly, stirring, until meat is browned on both sides.
6. Add carrots and cook 2 - 3 minutes, stirring constantly.
7. Add zucchini and stir-fry two more minutes.
8. Add mushrooms, green onions, and pea pods. Continue to stir-fry 1-2 minutes until vegetables are tender, yet crisp.
9. Add marinade and stir-fry one minute until all vegetables are lightly coated.

MEAL MANAGEMENT

Properly cooked vegetables add flavor, color, and texture to the meal. But vegetables should be carefully cooked because they are easily overcooked. Overcooked vegetables have off flavors, bleached colors, and a soft texture. Most vegetables are at their prime when they are cooked until just tender-crisp. Remove vegetables from the heat when they are slightly underdone. Heat remaining in the vegetables will finish the cooking process.

When meat is cut into small pieces and quickly cooked, even a less tender piece of meat such as round steak will be quite tender. The soy sauce marinade tenderizes the meat and also adds flavor.

Parsley and other herbs are frequently used to garnish vegetables and other foods. These garnishes make food look more interesting and attractive. You can also use edible flowers to make beautiful garnishes. Types of flowers which are edible include lilac, marigold, mint, pansy, rose, snapdragon, and violet. Be sure that any flowers you use on foods are edible because there are many common flowers which are poisonous. Do not use flowers which have had any type of pesticide sprayed on them.

The first vegetables from the garden taste fantastic. However, when a garden produces a bumper crop, it is easy to get tired of eating the same vegetable. Learn to use fresh vegetables in a wide variety of dishes in order to take advantage of crops during their time of abundant production.

What if your garden produces more vegetables than you can possibly eat? You can preserve them by freezing, drying, or canning the excess or you can give away the surplus. Although you may be tired of the vegetable, there are probably people in your area who would be delighted to receive the fresh produce.

NUTRITION AND HEALTH

Have you ever heard, "Eat your vegetables because they are good for you?" Is that true? Why are vegetables good for you?

Vegetables are nutrient-dense because they are low in calories and high in nutrients. Green and yellow vegetables are our main source of carotene, which our bodies convert into vitamin A. Green vegetables also provide iron, vitamin C, and calcium in our diet. In addition to the abundant supply of nutrients, vegetables are low in fat and sodium and high in fiber.

Nutrient losses occur during transportation and storage of fresh vegetables. Locally grown foods, if eaten soon after they are picked, taste great and are also high in nutrients.

A stir-fry main dish with vegetables and meat provides ample amounts of many nutrients. It is also low in fat.

BE A WISE CONSUMER

If you have locally-produced foods, you are in luck! You can pick or purchase the produce when it is just right, neither too green nor too ripe. Freshly picked vegetables which are at the proper stage of maturity have the best taste and also contain the most nutrients. Generally, locally grown produce is less expensive because high transportation costs are avoided.

Not all parts of vegetable plants are edible. Leftover plant material may not be food for you, but it can be turned into compost useful as fertilizer for your garden. Compost is made by mixing plant material such as garden wastes, tree leaves, or household food wastes with soil, piling it up and allowing the bacteria and fungi from the soil to break down the plant materials, producing compost.

SAFETY AND STORAGE

Insects can be helpful or harmful to a garden. Bees are necessary to pollinate some fruits and vegetables. Ladybugs eat insect pests. Other insects eat garden plants.

A gardener who is searching for methods to control harmful insects should be careful not to kill off all beneficial insects and be certain that any method used does not cause the product to be unsafe to eat. Use pesticides only as a last resort on garden crops. If pesticides are used, follow label directions carefully, and do not use the pesticide on plants for which it is not approved.

Remember, most pesticides are poisonous to humans as well as to garden pests. They should not be used without supervision by a knowledgeable adult. The County Extension Office has information about safe use of pesticides.

IDEAS TO EXPLORE

One person's garbage is another person's treasure. Ask friends and neighbors some of the following questions:

1. What do you do with leftover vegetables?
2. Do you make soup from the turkey or chicken bones?
3. How often do you save plastic margarine tubs and empty glass jars? How do you use them?

Share the answers at a 4-H meeting. Put together a poster or booklet on what to do with leftovers or discarded parts of food. Exhibit this at the fair or a local food event.

We eat foods from around the world. Your great-grandparents probably ate foods from around their neighborhood. Use the "Food Supply: Then and Now " sheet at the end of this unit to compare the foods you produce in your home with those produced by your parents and grandparents.

Interview relatives or friends who are 20-30 years older and 40-60 years older than you to find out their source of foods when they were young. Ask them which foods they produced for use by family, which foods they purchased, which foods were locally grown, and which commonly used foods were from another part of the United States or the world. Share your findings with the other members of your 4-H club.

Take a walk through the grocery store and search for items which are produced in your county, your state, and within the United States. Compare the sources of your foods with the foods eaten by the persons you interviewed.

Would you like to learn more about growing plants? Consider enrolling in a 4-H gardening project.

CHECK YOUR PRODUCT

Was your stir-fry vegetable dish:

1. A pleasing mixture of different colors, shapes, and textures?
2. Cooked until all vegetables were tender-crisp, with none overdone or underdone?

Stir-frying may take some practice to get all the foods cooked just to the proper doneness.

CHECK WHAT YOU LEARNED

1. Why do people grow vegetable gardens?
2. How can you tell when a vegetable is cooked until it is tender-crisp?
3. What kinds of precautions should home gardeners take when they use pesticides?
4. What is a nutrient-dense food? What are the nutrients which are well supplied by vegetables?

"Food Supply: Then and Now"

Check off those items below that you have done. Then take the list home and ask your parents which of these activities they have done and which of these activities your grandparents and great-grandparents probably did. Add the total checks at the bottom of each line. The difference between the totals shows you how much the food supply has changed.

Have you ever...	You	Your Parents	Your Grandparents	Your Great-Grandparents
...stored vegetables in the cellar for winter?				
...gathered eggs from a nest?				
...made homemade ice cream?				
...made sun tea?				
...canned fruits and vegetables?				
...used wild animals for meat?				
...made sauerkraut?				
...dried fruits in the sun?				
...turned a cream separator?				
...milked a cow?				
...canned meat or chicken?				
...baked bread?				
...made applesauce?				
...gathered nuts?				
...cleaned a fish?				
...cleaned and plucked a chicken?				
...stuffed sausage links?				
...rendered lard?				
...chewed wheat for gum?				
...picked wild fruits to eat?				
...ground wheat into flour?				

Adapted from: Foodways, 4-H Youth Programs, Cooperative Extension Service, Michigan State University, and the Folk Arts Division of the Michigan State University Museum.

UNIT 8
LIVING OFF THE LAND: HUNTED AND GATHERED FOODS

KEY POINTS

In this unit you will learn:

- About wild edible foods available in the Pacific Northwest.
- About food patterns of Native Americans.
- To prepare game steaks, fish, and huckleberries.

INTRODUCTION

For at least 10,000 years, Native American Indians who lived in the Pacific Northwest hunted and gathered from the bountiful food supply. Nch'i wana (the Columbia River) and its tributaries were an important source of food for inland Native Americans. For thousands of years, no river system in the world produced more salmon and steelhead trout than the Columbia River and the rivers which flow into it from Idaho, Washington, Oregon, and British Columbia, Canada.

The sea was the main source of food for coastal peoples. In addition to salmon, they utilized whale, porpoise, and many kinds of fish. Other foods utilized from the sea were shellfish such as geoduck clams (pronounced "gooey duck") and Dungeness crab.

Indians also hunted migrating waterfowl and game animals such as deer, moose, elk, mountain goat, sheep, and bear. Fruits and berries were dried in the summer sun and stored for the winter. Salmon and other fish and meat from game animals were cut into strips and dried or salted and smoked to become a staple of the winter diet. The variety of foods available fed about 200,000 Indians, an indication of how rich the Pacific Northwest was in food before agriculture was introduced to the area.

There are still many kinds of foods available to hunt or gather in the Pacific Northwest. Have you ever gone fishing or hunting or gathered wild huckleberries?

FOOD PREPARATION

Foods which have been hunted or gathered from the wild are prepared like similar foods purchased in the supermarket. In this lesson, you'll learn to prepare wild game, fish, and huckleberries. If you don't have hunted and gathered foods available, substitute foods purchased in the grocery store.

Game Cookery

Wild game is usually very low in fat. The meat may contain some flavors from the plants the animal has been eating and may also be tough if the game meat comes from older animals. If game meat is tender, try stir-frying the meat. Braising or cooking with water will make almost any piece of game meat tender and tasty.

BRAISED GAME STEAKS (Makes 4 servings)

1 pound steaks from wild game (beef round steak may be substituted)
1/2 cup flour
1 teaspoon salt
1/2 teaspoon pepper
1 tablespoon oil
2/3 cup water

1. Tenderize meat by either pounding with a meat hammer or by using a powdered meat tenderizer.
2. Mix flour, salt, and pepper in small, flat dish or pan.
3. Dip meat in pan of flour, coating all sides.
4. Heat oil to moderately hot in heavy skillet. Add meat, brown on all sides.
5. Add 2/3 cup of water. Cover tightly.
6. Simmer slowly until meat is tender, about 30 minutes. Turn the meat occasionally, adding water if necessary.

Fish Cookery

For many persons who live in the Pacific Northwest, a pan-fried fish cooked over the campfire is a very special part of camping trips.

PAN-FRIED FISH

1 teaspoon salt
1/2 teaspoon pepper
1/4 cup flour
1/4 cup cornmeal
2 pounds small fish (fresh or thawed frozen)
Fat for frying (about 1/4" covering the bottom of the skillet)

1. Mix salt, pepper, flour, and cornmeal in flat dish or pan. Wash fish, drain, and coat with flour mixture.
2. Fry fish about 4-5 minutes or until brown on bottom side. Turn fish carefully.
3. Fry 4-5 minutes more or until fish is browned. Fish is done when it flakes easily when tested with a fork.
4. Put cooked fish on paper towel to absorb extra fat.

MICROWAVE-COOKED WHOLE FISH

1. With a sharp knife, make three slashes across the entire body of the fish on both sides. Brush inside of cavity and both sides of fish with melted butter or margarine. Sprinkle cavity with salt and seasoning to taste. Put in microwave cooking dish. It takes 4 - 7 minutes for each pound of fish cooked in the microwave oven.
2. If you have a two pound fish, microwave on high for five minutes.
3. Turn fish and cook for five more minutes. Remove from microwave oven and let stand, covered, for a few minutes. Test for doneness. Continue cooking if fish does not flake easily with a fork.

Huckleberries

Wild huckleberries have a delicious flavor. Since the huckleberries are not cooked in this pie, all their natural flavor and color are preserved. Blueberries may be substituted for huckleberries.

FRESH HUCKLEBERRY PIE

Prepare pie shell:

1 cup all-purpose flour
1/2 teaspoon salt
1/3 cup shortening
3-4 teaspoons cold water

1. Stir together flour and salt. With a pastry blender, cut in shortening till pieces are the size of small peas.
2. Sprinkle one tablespoon water over part of the mixture; gently toss with a fork. Push to side of bowl; repeat procedure until all flour is moistened.
3. Form dough into a ball.
4. Flatten dough with hands on lightly floured surface. With a rolling pin, roll from center to edge, forming a circle about 12 inches in diameter.
5. Gently wrap pastry around rolling pin. Unroll onto a 9-inch pie pan.
6. Ease pastry into pie pan, being careful to avoid stretching pastry.
7. Trim edge 1/2 - 1 inch beyond edge of pie plate, fold excess under. Flute or pleat edge of pastry, using the back of a spoon and fingertips.
8. Prick bottom and sides of pastry shell with a fork.
9. Bake in 450° oven for 10 to 12 minutes, until golden brown.

Prepare pie filling:

4 cups huckleberries or blueberries, fresh or frozen
1 cup liquid (water or a mixture of huckleberry juice and water)
1 cup sugar
3 tablespoons cornstarch

1. If using fresh huckleberries, wash and drain berries. If using frozen huckleberries, thaw and drain berries, saving the huckleberry juice for part of the liquid.
2. Combine one cup huckleberries with 2/3 cup liquid. Simmer three minutes.
3. Blend sugar and cornstarch. Add remaining 1/3 cup liquid. Add to simmering mixture. Boil one minute, stirring constantly.
4. Remove from heat and add remaining three cups of huckleberries.

5. Put into the baked pie shell. Chill in refrigerator several hours before serving.

MEAL MANAGEMENT

When you prepare a meal, decide what time you wish to serve the meal and calculate the time needed to prepare each dish. Allow a little extra time. Count back from the serving time to decide when the preparation for each dish should be started.

The first time you prepare a meal, ask a parent or other adult to help you. An extra pair of hands in the kitchen can help you avoid a last-minute rush if you have lots of things which need to be done at the same time. Don't be discouraged if you feel you are slow when you fix foods. Experienced cooks have developed speed through many hours of practice.

Take time to clean up cooking equipment and countertops throughout the meal preparation time.

Here's an example worked out for you, assuming that the meal will be served at 6 p.m.

Menu

Braised Game Steaks or Pan-Fried Fish
Buttered Boiled Potatoes with Chopped Parsley Garnish
Green Peas (from frozen peas)
Waldorf Salad (with apples, celery and walnuts)
Hot Rolls (purchased as brown and serve rolls)
Huckleberry Pie
Milk

2:00 (or earlier) - Prepare huckleberry pie and chill.

4:15 - Make Waldorf Salad, put in refrigerator.

4:40 - Begin preparation of Braised Game Steaks, start cooking (or get the fish prepared for frying).

5:00 - Peel potatoes, start cooking them at 5:20.

5:20 - Set the table.

5:30 - Begin cooking pan-fried fish

5:45 - Cook peas. Put brown and serve rolls in oven; turn meat, checking to see if more water is needed.

5:50 - Chop parsley, melt butter, put butter and parsley on potatoes.

5:55 - Pour milk, put foods into serving dishes and put on the table.

6:00 - Dinner is served.

SAFETY AND STORAGE

High-quality fish - Fish has a delicate flavor and needs to be handled carefully to prevent development of off-flavors. Fresh fish should be used within 2-3 days after it is caught (or purchased). If you are on a camping/fishing trip, keep fish well-iced in a cooler.

If you have excess fish, it may be frozen or canned. Follow directions in Cooperative Extension freezing and canning bulletins to produce tasty, safely preserved fish. For best taste, use frozen fish within several months.

High-quality game meat - Game meat comes in an assortment of flavors - some good, some not so good. Off-flavors are frequently caused by improper dressing and chilling of the wild game. To reduce the development of off-flavors, proper dressing and chilling of the carcass are essential. If you hunt game, learn to handle the meat properly. Your county Extension office has bulletins on the care of game meat.

Safe use of wild plants - There is a wide variety of edible wild plants. There are also poisonous wild plants. Be sure that plants you gather are safe to eat. Do not eat unknown plants. If you plan to gather wild plants, learn the edible ones by gathering with an expert on edible wild plants or by consulting a book with pictures of edible plants. Be careful not to gather wild plants in the road ditches because these plants are more likely to have been sprayed with a pesticide.

NUTRITION AND HEALTH

Good health is related to many factors, including eating a healthy diet, exercising, and coping with stress. Wise use of leisure time can reduce stress, thus increasing health. Hunting, fishing, gathering foods, and other outdoor activities which involve physical activity can be very effective ways to reduce stress and develop physical fitness.

BE A WISE CONSUMER

How can you be a wise consumer of wild resources? Follow fishing and hunting laws. Be certain that you only gather an amount you will actually use. When you are fishing, keep only the amount of fish you will be able to use. Leave some wild berries for the birds or the bears. Do not harvest any plants or animals which are rare species.

Suitable habitat is essential for survival of wild species of plants, animals, birds, and fish. Wise hunters and gatherers strive for preservation of the habitat necessary for survival of wild species.

IDEAS TO EXPLORE

Investigate the variety of food products which can be hunted and gathered in your county by reading about local plants and animals or talking with someone who hunts and/or gathers local foods. If possible, try some of these foods. Do not eat any wild plants unless you are certain they are edible.

Invite a Native American to tell how he/she uses wild foods. Ask about foods used by Native Americans long ago. Which of those foods are still commonly eaten?

More than 100 years ago, Native Americans in the Pacific Northwest were promised they would be allowed to fish at their usual fishing grounds "as long as the sun shines, as long as the mountains stand, and as long as the rivers run." Investigate how well this promise has been kept by reading books on the subject, talking to Native Americans, and/or contacting the Fish and Game Department of your state. (Uncommon Controversy, University of Washington Press, 1970, has an excellent summary of the fishing rights issue.)

In some inner-city areas, there are some persons who live on the streets and obtain their food from garbage dumpsters. These people have been called urban hunters and gatherers. Contact a charity which aids poor and homeless people to find out more about sources of food for people who have little or no money.

CHECK YOUR PRODUCT

Were your braised game steaks:
1. Well-seasoned and tasty?
2. Tender and moist?

Were your fish:
1. Well-seasoned and tasty?
2. Cooked until done, but not overcooked?

Did your huckleberry pie have:
1. A flaky, tender pie crust?
2. A pleasing blend of flavors?

If your foods do not pass these tests, perhaps you will want to try again. Be sure to pay close attention to the recipe ingredients and instructions.

CHECK WHAT YOU LEARNED

1. What kinds of foods were used by Pacific Northwest Indians long ago? Which of these foods have you eaten?
2. How do you handle fish and game meat to preserve quality?
3. What are ways to learn about wild plants which can be safely eaten?
4. What are some benefits to gathering and hunting foods?

UNIT 9
PUT IT ALL TOGETHER

KEY POINTS

In this unit, you will:

- plan and prepare a meal of Pacific Northwest foods

You've learned about some of the foods grown in this area and people who work with those foods. You have also learned some ways to cook those foods. Wouldn't it be fun to show what you have learned in the project by planning and preparing a meal of Pacific Northwest foods?

When you plan and prepare the meal, you will have many decisions to make. Schedule a special meeting to plan the meal and develop a detailed plan of action. As you plan and prepare your meal, follow all the guidelines you have learned in this project about meal planning, handling foods safely, and cooking foods.

In addition to preparing a meal, consider making some displays or posters to share information you have learned.

Your leader will help you make detailed plans for your meal. The things you will need to consider are:

1. Who will be invited? Perhaps you'd like to invite some local people who work with food in some way. You can show them what you've learned about foods grown in the area.
2. Where and when will the meal be held?
3. How will you pay for the meal?
4. What foods will we serve? Do you want to choose a theme, such as planning a meal from a certain locality, or foods eaten by pioneers in the area?

When you have your menu planned, check it over. Think about the amount of time you have to prepare, serve, and eat the meal and the space available. Consider your cooking skills. How much money is available for food? Is your meal plan feasible when you consider these factors? Make appropriate changes if it is not.

Now think about the foods you have selected. Do they go well together? Meals usually have several mild-flavored foods and a more highly seasoned food. Several different colors, shapes, and textures add interest to a meal.

Don't forget to plan a nutritionally balanced meal using a variety of foods and following the Dietary Guidelines (see Unit 1). If you include a high-fat or sweet food in the menu, plan to serve small portions.

When you have the meal planned, make a grocery list. Check it to be sure you haven't forgotten anything.

5. Make a detailed list of each task which needs to be done and decide who will do it. You'll need to select a place for the party, send invitations, and buy groceries. You will also need a detailed time schedule for preparing the meal. Plan so all foods are ready at the same time. Review and follow the food handling guidelines for raw poultry and meats in Unit 5.

Plan how you will serve the meal. Does buffet style (see Unit 5) work well for the meal? Would family style, where the food is put in serving dishes and placed on the table, be better? Whichever method you choose, be sure to serve hot foods hot, not lukewarm. Serve cold foods cold.

Plan the table decorations. If you aren't sure how to set a table correctly, find a book or pamphlet which tells you how to do it.

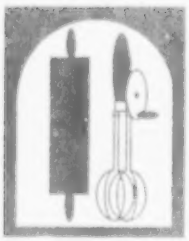
Designate a host or hostess for each table. The host or hostess will direct mealtime courtesies which will help both you and your guests feel more at ease. Courtesy is kind consideration of others. As

ease. Courtesy is kind consideration of others. As guests arrive, greet them with warmth and be sure that everyone meets everyone. When the meal is ready, indicate where you want each person to sit at the table. Pass food that is in front of you to the person on your right. When everyone has been served, the host or hostess begins eating. This is the cue for others at the table to start eating. The host or hostess also should take the lead in getting conversation going. You can tell your guests about some of the things you've learned about the Pacific Northwest foods. If you have invited guests who work in the food industry, ask them about their jobs. When the meal is over, the host or hostess stands, giving the cue to others that they may leave the table.

Decide how to divide cleanup tasks. Some of you may need to entertain your guests after the meal while others begin cleanup because leftover foods need to be promptly put in the refrigerator or freezer. Midway through the cleanup process, trade places so everyone helps with both cleanup and entertaining guests.

If you are preparing exhibits to show your guests, decide where you will put the exhibits and if you need to have anyone talk to your guests about the exhibits.

When you have all of these details planned, check all of your plans. Have you forgotten anything? Your goal is to have everything so well planned that the entire meal goes very smoothly and you can enjoy the time spent fixing and eating the meal.



UNIT 10
WORKING WITH FOOD: CAREERS AND HOBBIES

KEY POINTS

In this unit, you will:

- Evaluate your meal of Pacific Northwest foods.
- Learn about careers which involve foods.
- Plan for next year.

Planning a meal to share with guests is a big job. Were you a little nervous about doing it? How did it go? Spend some time to evaluate the meal. What parts went well? What would you like to do differently next time?

CHECK YOUR MEAL

When you planned and prepared your meal of Pacific Northwest foods, did you:

- Have a pleasing mix of foods with different flavors, colors and textures?
- Have a variety of foods and follow the Dietary Guidelines?
- Store and prepare the foods according to food handling guidelines?
- Have all foods ready to serve at the same time?
- Do sufficient advance planning so you could enjoy fixing and eating the meal?

Planning and fixing meals takes practice. Which of the above areas do you want to improve the next time you prepare a meal?

Your experiences with food have been as a hobby, something fun that you enjoy doing. Have you ever thought about all the people in your area whose jobs involve working with food?

The person who serves your school lunch or the meal at your favorite restaurant is at the end of a long chain of people who work together to bring the food to you. Others grew and harvested the food. It was then processed, inspected, sold, and delivered.

About 20% of the workers in the Pacific Northwest are involved in some way with food production, transportation, and preparation. Let's look at several food-related careers and think about how that same task is performed by persons who prepare meals at home.

Dietitian

Dietitians are trained to apply the principles of nutrition to menu planning. They work in schools, hospitals, nursing homes, and many other places. Dietitians plan meals which are designed to promote health. They also consider factors such as color, texture, taste, and the food preferences as well as any special dietary needs of the people who will be eating the food.

The Dietary Guidelines are a tool you can use to plan meals which promote health. The Pattern for Daily Food Choices (see page 36) is an easy way to plan meals following the Dietary Guidelines.

If you want to see whether you eat healthy meals, keep track of all the foods you eat for three days. Check your diet by the Pattern for Daily Food Choices.

What foods should you add? What changes do you need to make to have your diet fit the Dietary Guidelines? What problems did you have identifying foods which are high or low in fat, salt, sugar, or calories?

If you are interested in a career as a dietitian, you need to learn math and chemistry and get a college degree in human nutrition.

Food Processor

Food processing includes all the things done to change the food from the raw stage to the final product. In this unit, you've learned about cheese making and potato processing. A wide variety of other foods are also processed in the Pacific Northwest. Food processing jobs include seasonal jobs which are often done by high school and college students during summer break, as well as food science careers which might involve developing new products or controlling quality of the processed foods.

Many people are home food processors. About half the families in the Pacific Northwest can, freeze, or dry some foods. When foods are processed at home, follow Cooperative Extension recommendations to produce safe, high-quality foods.

Many food processing jobs do not require special training. If you'd like to become a food scientist, you will need to learn chemistry and biology, and obtain a college degree in food science.

Food Buyer

Every business which serves food must have a manager or food buyer who makes decisions about amounts and types of foods to buy. The food buyer looks for high quality food at the lowest cost. Buyers decide the amount of food to purchase based on the number of people they expect to serve and the amount of storage space available. Food purchases for home are based on the same principles. The only difference is that you buy six hamburger buns instead of six thousand.

Go shopping for the food for your home. Think about what factors influence the foods which are purchased for your family.

If you are interested in a career as a food buyer, you need to learn math and consider majoring in business, restaurant management, economics, food science, or foods and nutrition.

Food Sanitarian

Food sanitarians check restaurants and other places that prepare food to be sure correct food handling procedures are used so the foods do not cause illness. The food sanitarian checks that these guidelines are followed:

1. Hands are washed thoroughly before and after handling foods.
2. Facilities, utensils, and equipment are constructed so that they can be thoroughly cleaned.
3. Utensils, dishes, cutting boards and counters are washed thoroughly after contact with raw meat or poultry.
4. Frozen meat, poultry, and fish is thawed in the refrigerator or by using a microwave oven.
5. Foods which are perishable (will spoil) are kept either hot (above 140°F) or cold (below 40°F).
6. Leftover food is promptly put in the refrigerator or freezer in shallow containers.
7. Meat is cooked until it is properly done (160°F for pork, 180°F for poultry).

The food sanitarians' guidelines also apply to home kitchens. Check to see if the guidelines for food handling are followed in your home. Make a list of recommended changes.

If you are interested in a career as a food sanitarian, you will need to learn math and chemistry and complete a college degree in microbiology or food science.

Chef

Many people earn a living as a head chef, salad chef, pastry cook, or a fry cook. If you were preparing food at a restaurant, here are some things you would need to do to be sure that people like your meal:

1. Have all foods ready to serve at the same time.
2. Cook all foods until done. Do not overcook or undercook.
3. Season food so it has an appealing taste.
4. Serve hot foods hot, not lukewarm. Serve cold foods cold.

Home-prepared meals can be as beautifully cooked and served as the most elegant restaurant meal.

Whenever you prepare foods for family or friends, follow the guidelines used by chefs.

If you'd like to become a chef, you should take some cooking classes in high school or at a trade school. Many community colleges have culinary arts programs where you can learn to cook food for groups. You should also practice cooking at home to develop your skill.

As you begin to think about future career plans, you may want to investigate further some food-related careers. The ones described are only a sampling of all that are available.

PLANNING AHEAD

You are becoming an experienced cook and you've also learned about nutrition, food production, and fitness in this project. What 4-H project are you considering for your next project? Take a look at Fit It All Together III, Foods of the Pacific Northwest III, food preservation projects, and others. Investigate your options and decide what you'd like to do next.

Pattern for Daily Food Choices

Food Group	Suggested Daily Servings*
Breads, Cereals, and Other Grain Products Whole-grain Enriched	Six to eleven servings. Include several servings a day of whole-grain products.
Fruits Citrus, melon, berries Other fruits	Two to four servings.
Vegetables Dark-green Deep-yellow Dry beans and peas (legumes) Starchy Other vegetables	Three to five servings. Include all types regularly; use leafy dark-green leafy vegetables, and dry beans and peas several times a week.
Meat, Poultry, Fish and Alternates (Eggs, dry beans and peas, nuts and seeds)	Two to three servings. Total five to seven ounces lean.
Milk, Cheese and Yogurt	Two servings. Three servings for teens and women who are pregnant or breastfeeding; four servings for teens who are pregnant or breastfeeding.
Fats and Sweets	Avoid too many fats and sweets.

You have probably learned about the Basic Four Food Groups in school or other 4-H projects. The Pattern for Daily Food Choices was recently developed to help people choose foods which fit the Dietary Guidelines. Choose foods daily from each of the first five major groups. Include different foods from within the groups. Have at least the smaller number of servings suggested from each group.

In addition to following the "Pattern for Daily Food Choices," you should:

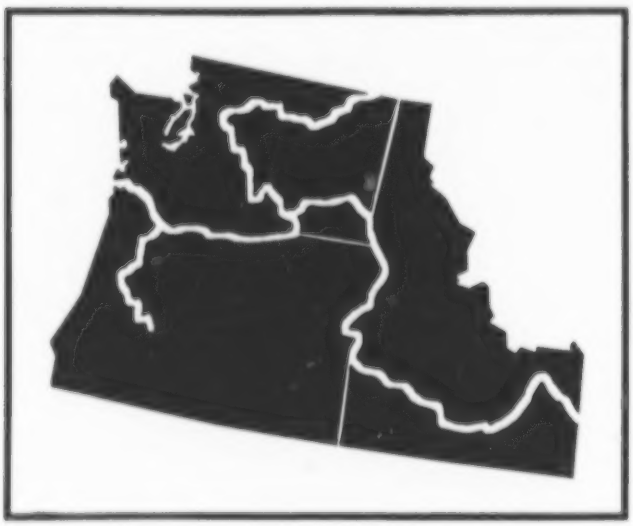
Maintain desirable weight. Plan meals so that you use about as many calories as you eat. If you are very active in sports, you may need to eat extra food to maintain desirable weight. If you are getting above the desirable weight for your age and height, then you should reduce your calorie intake. In addition, you should increase your calorie use with a regular exercise program.

Use limited amounts of high-fat, salty, and sweet foods. French fries and milkshakes may taste great, but a baked potato and a glass of milk contain about the same nutrients and a lot less calories, along with less fat, sugar, and sodium. Most highly processed and snack foods are high in the "need-to-limit" foods.

Include foods with starch and fiber. Serve a food high in starch at each meal. Bread, rice, potatoes, and breakfast cereals are examples of starchy foods. Eat whole-grain cereals, fruits, and vegetables for fiber.

*What About the Number of Servings?

The amount of food you need depends on your age, sex, physical condition, and how active you are. Almost everyone should have at least the minimum number of servings from each food group daily. Many women, older children and most teenagers and men need more. The top of the range is about right for an active man or teenage boy. Young children may not need as much food. They can have smaller servings from all groups except milk, which should total two servings per day.



A Pacific Northwest Extension Publication
Washington Oregon Idaho

Pacific Northwest Cooperative Extension bulletins are joint publications of the three Pacific Northwest states–Washington, Oregon, and Idaho. Similar crops, climate, and topography create a natural geographic unit that crosses state lines. Since 1949, the PNW program has published over 250 titles. Joint writing, editing, and production has prevented duplication of effort, broadened the availability of faculty specialists, and substantially reduced costs for the participating states.

Issued by Washington State Cooperative Extension, F. L. Poston, Director; Oregon State University Extension Service, O. E. Smith, Director; University of Idaho Cooperative Extension Service, H. R. Guenthner, Director; and the U. S. Department of Agriculture in furtherance of the Acts of May 8 and June 30, 1914. Cooperative Extension programs and policies comply with federal and state laws and regulations on nondiscrimination regarding race, color, national origin, religion, gender, age, disability, and gender preference. Trade names have been used to simplify information; no endorsement is intended.

Published December 1988. $1.25/0.00/1.25 PNW335

More boys and girls belong to 4-H than any other youth group.